EAGLE TUGS

THE POWER TO MOVE YOU

PARTS & SERVICE MANUAL

Vehicle Types: TT-10, TT-12

Engine Type: Isuzu Turbo Diesel Engine Models

INTRODUCTION

From everyone at Eagle Tugs, we would like to say Thank You for purchasing an Eagle TT-series tow tractor. We take a lot of pride in the quality of the products that we build, as well as our continued customer service. Our goal is to build a long term relationship with our customers. We want you, the customer, to be 100% satisfied with your Eagle experience. To us, this means that your Eagle TT-series tractor is functionally superior to any other products you have used. This also means that your Eagle product is continually supported in a professional, timely manner.

PURPOSE & USE OF THIS MANUAL

This manual is designed as a reference guide to make the reader more familiar with the components of the Eagle TT-10-TT-12 tow tractor models. This manual includes part numbers and descriptions to assist the reader in ordering component spare/service parts. The manual also outlines the Scheduled Maintenance Intervals recommended by Eagle in order to keep your vehicle running properly. In this manual you will also find the Eagle Standard Warranty on all of the TT-series tow tractors. However, for more detailed information on the Eagle Warranty and procedure, as well as information pertaining to the safe operation of your Eagle product, please see the Eagle Operations Manual that was also included with your vehicle.

TECHNICAL ASSISTANCE

When addressing a repair procedure or operational problem, please remember that Eagle technical support is only a phone call away. Eagle technicians are available to assist you in vehicle diagnostics and recommended repair procedures. We encourage you to use this service to reduce machine down-time and to gain a better understanding of proper repair procedures.

ORDERING SPARE/SERVICE PARTS

Eagle inventories most of the component parts found in its TT-series tow tractors, and most spare/service parts can be shipped the same day the order is received. Parts orders need to be received at Eagle by 12:00 pm (Noon) EST in order for the parts to be shipped that same day. Parts ordered after 12:00 pm EST will most likely be shipped the following day.

CONTACT INFORMATION

Eagle Corporate Office
26111 Northline Rd
Taylor, MI 48180
(800) 671-0431
www.eagletugs.com

Customer Service
customerservice@eagletugs.com
(734) 442-1000 -- (800) 671-0431

Parts & Service
parts@eagletugs.com
(734) 442-1000 -- (800) 671-0431

Technical Support
support@eagletugs.com
(734) 442-1000 -- (800) 671-0431

TABLE OF CONTENTS

INTRODUCTION 3

PURPOSE & USE OF THIS MANUAL 3
TECHNICAL ASSISTANCE 3
ORDERING SPARE/SERVICE PARTS 3
CONTACT INFORMATION 3

WARRANTY 6

VEHICLE ID INFORMATION 6
WARRANTY REGISTRATION 6
WARRANTY INFORMATION 7
AUTHORIZED ISUZU DISTRIBUTOR MAP 8
AUTHORIZED ISUZU DISTRIBUTOR DIRECTORY 9
ISUZU SERVICE & PARTS BULLETIN (J-SERIES ENGINE OIL FILL PROCEDURES) 12

SERVICE PARTS ILLUSTRATIONS & DETAIL 15

IDENTIFICATION KEY 15
POWER TRAIN 16
Engine Dress – Isuzu Turbo Diesel 16
DRIVELINE 22
Drive Shaft Assembly—Front 22
Drive Shaft Assembly—Rear 23
TRANSMISSION 24
Transaxle Mounting & Misc. Parts 24
Transaxle Mounting & Misc. Parts—Detail 25
Transaxle Case Extension & Retainer 26
Transaxle Case Extension & Retainer - Detail 27
Cooling System—Transmission 28
COOLING SYSTEM 29
Cooling System—Turbo Diesel 29
AXLES 30
Axle Assembly—Front Drive (All Wheel Drive) 30
Axle Assembly—Rear 31
Axle Assembly Breakdown — Front Drive (All Wheel Drive) 32
Axle Assembly Breakdown — Front Drive—Detail 33
Axle Assembly Breakdown — Rear Drive 36
Axle Assembly Breakdown — Rear Drive—Detail 37
BRAKES 40
Drum Brake Assembly — Rear 40
Brake Caliper Assembly— Front 41
Brake System Hydraulic 42
Brake Actuator Assembly 44
Brake Pedal Assembly 45
Parking Brake Actuator Assembly 46
Parking Brake Actuator Assembly — Detail 47
STEERING SYSTEM 48
Steering System Breakdown (For Serial Numbers Starting After 12135 & Above) 48
Steering System Breakdown — Detail 49

TABLE OF CONTENTS

Steering System Breakdown (For Serial Numbers Starting Before 12136 & Below) 51
Steering System Breakdown — Detail 52
AIR CLEANER, FUEL SYSTEM & EXHAUST 52
Air Cleaner Assembly — Diesel 52
Air Cleaner Sub-Assembly 53
Fuel System—Diesel 54
Exhaust System—Diesel 55
OPERATOR COMPARTMENT 56
Transmission Control 56
Accelerator Pedal Assembly 57
Instrument Panel 58
Instrument Panel—Detail 59
LIGHTS & ELECTRIAL 61
Electrical Board 61
Headlight & Taillight Assembly 62
Wiring Harness 64
Wiring Schematic 65
Shutdown Option Wiring 66
Cab Option Wiring 67
OTHER ASSEMBLIES 68
Body Assembly 68
Body Assembly With Split Hood 69
Wheel & Tire Assembly—Dual Rear Wheel Model 70
Hitch Options 71
Cab Option 72
Cab Option Detail 73
Cab Heater Detail 74
Strobe, Beacon & Floor Mats 75
Other Options 76

SCHEDULED MAINTENANCE 77

Lubrication diagram - TT Series-All Wheel Drive 77
Preventative Maintenance schedule 78
Daily operator responsibilities 79
Specifications & capacities 80
Tips for All Weather Traction 82
Front End Alignment Procedure 83

WARRANTY

VEHICLE ID INFORMATION

This information can be found on the tractor's I.D. Plate located on the firewall next to the driver's seat. Additionally, there is a permanent serial number located on the rear bulkhead inside the engine compartment.

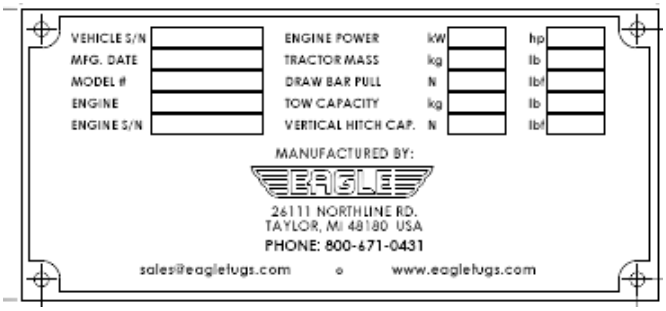
MODEL _____

SERIAL NO _____

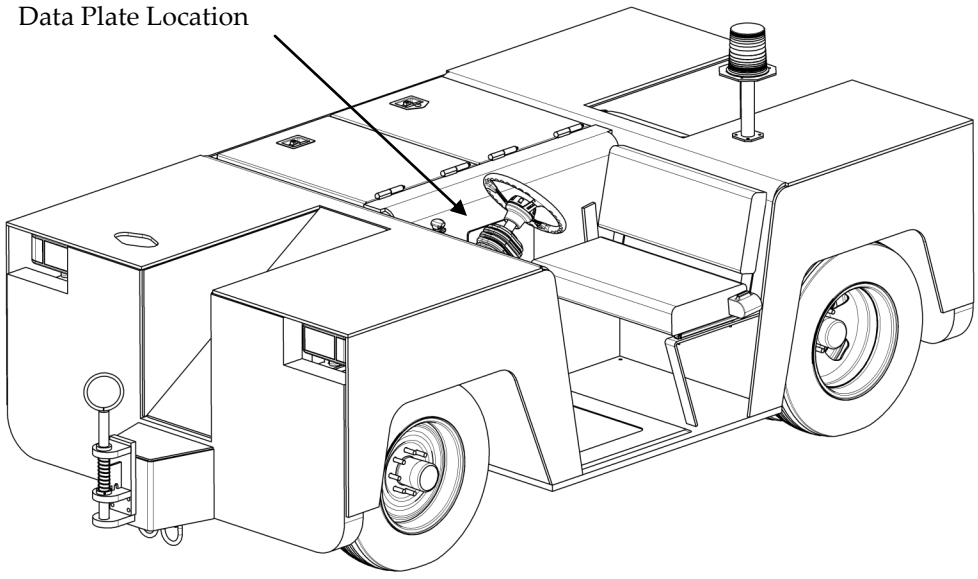
MFG DATE _____

ENGINE TYPE _____

ENGINE SERIAL NO _____



Data Plate Location



WARRANTY

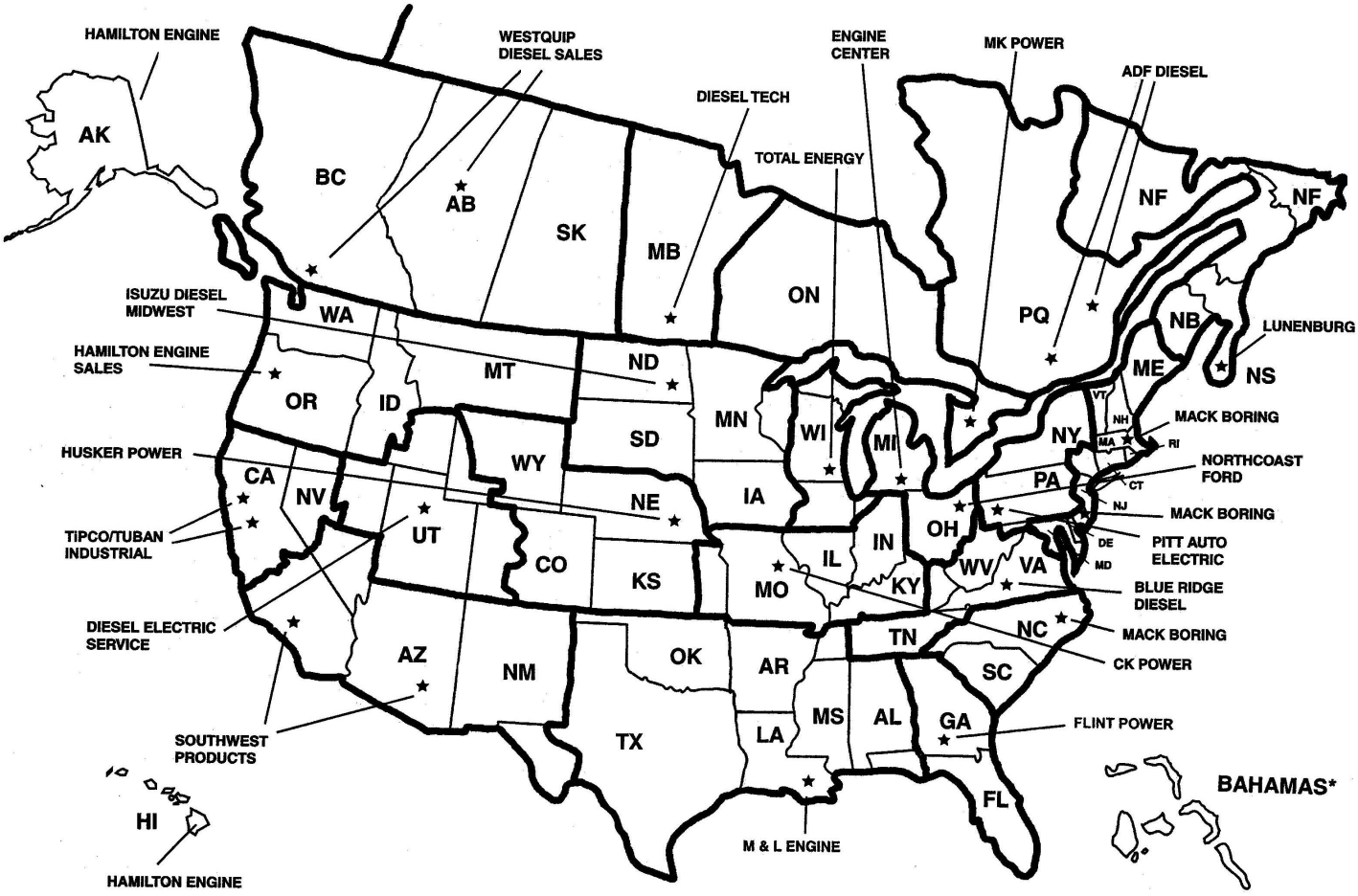
WARRANTY INFORMATION

Please read the Eagle Tugs warranty statement (available on our website) carefully.

When contacting Eagle Tugs for warranty or parts service, please have the following information ready:

- Tractor model number
- Tractor serial number
- Current hour reading

AUTHORIZED ISUZU DISTRIBUTOR MAP



AUTHORIZED ISUZU DISTRIBUTOR DIRECTORY

UNITED STATES

BLUE RIDGE DIESEL
INJECTION INC
1016 Delaware Street
Salem, VA 24153-0867
540.389.7296
800.476.0456
540.387.2792 fax
www.blueridgediesel.com

CK POWER PRODUCTS
1100 Research Blvd
St. Louis, MO 63132
314.868.8620
314.868.9314 fax
www.ckpower.com
jcostello@ckpower.com

DIESEL ELECTRIC SERVICE
& SUPPLY CO
652 West 1700 South
Salt Lake City, UT 84104
801.972.1836
801.975.7316 fax
www.dessco.com

ENGINE CENTER**
2351 Hilton Road
Ferndale, MI 48220
248.399.0002
800.726.8870
248.399.3142 fax
info@enginecenter.com

FLINT POWER SYSTEMS
408 South Westover Blvd
Albany, GA 31707
229.888.1900
800.821.4025
229.435.2946 fax
www.flintpower.com

HAMILTON ENGINE
SALES INC
5540 NE Columbia Blvd
Portland, OR 97218
503.288.6714
800.437.3644
503.287.8289 fax
www.hamiltonengine.com

HUSKER POWER PRODUCTS
2955 West Highway 6
Hastings, NE 68901
402.463.1531
800.752.0888
402.463.1313 fax
www.huskerpowerproducts.com

ISUZU DIESEL MIDWEST
3141 - 39 Street, SW
Fargo, ND 58104
701.282.7915
877.831.7915
701.282.2472 fax
joelck3@aol.com

M & L ENGINE, LLC
1212 St. Charles Street
Houma, LA 70360
985.857.8000
800.960.0068
985.851.0006 fax
www.mlengine.com
sales@mlengine.com

MACK BORING & PARTS CO**
48 Leona Drive
Middleborough, MA 02346
508.946.9200
800.622.5364 ext 3
508.946.0779 fax
www.mackboring.com

MACK BORING & PARTS CO**
4500 Northchase Parkway, NE
Wilmington, NC 28405
910.792.1900
800.622.5364 ext 2
910.792.6266 fax
www.mackboring.com
carolina@mackboring.com

MACK BORING & PARTS CO
2365 Route 22 West
Union, NJ 07083
908.964.0700
800.622.5364 ext 1
908.964.8475 fax
www.mackboring.com
sales@mackboring.com

NORTH COAST FORD
INDUSTRIAL
11885 Bellaire Road
Cleveland, OH 44135
216.251.5800
800.423.1316
216.251.8675 fax
www.northcoastford.com
mail@northcoastford.com

PITT AUTO ELECTRIC CO
1241 Freedom Road
Cranberry Township, PA 16066
724.778.8200
800.245.0711
724.778.8206 fax
www.pittauto.com
info@pittauto.com

UNITED STATES, cont'd.

SOUTHWEST PRODUCTS CORP
5143 W. Roosevelt
Phoenix, AZ 85043
602.269.3581
877.779.3581
602.269.8448 fax
www.southwestproducts.com

SOUTHWEST PRODUCTS CORP**
2760 Junipero
Signal Hill, CA 90755
562.424.0913
877.779.3581
562.424.4517 fax
www.southwestproducts.com

TiPCO**
8440-C Belvedere Avenue
Sacramento, CA 95826
916.383.1956
800.458.4726
916.383.4296 fax
www.tubanonline.org
info@tubanonline.org

TOTAL ENERGY SYSTEMS
8525 North 87 Street
Milwaukee, WI 53224
414.357.7900
800.236.6626
414.357.6278 fax
www.totalenergysystems.com
wschmidt@totalenergysystems.com

TUBAN INDUSTRIAL
PRODUCTS CO
2003 Leghorn
Mt. View, CA 94043
650.968.2431
800.648.4726
650.969.1267 fax
www.tubanonline.org
info@tubanonline.org

CANADA

ADF DIESEL
1790, route de l'Aeroport
Ste-Foy, PQ G2E 3L9
418.681.0631
800.265.6720 (Canada)
418.681.3686 fax
www.adfdiesel.com

ADF DIESEL**
2355 Boul Hymus
Dorval, PQ H9P 1J8
514.684.0440
800.517.1489 (Canada)
514.684.2417 fax
www.adfdiesel.com
marc.fontaine@adfdiesel.com

DIESELTECH
100 Otter Street
Winnipeg, MB R3T 0M8
204.452.4334
800.665.7665 (Canada)
204.452.7984 fax
www.dieseltech.mb.ca
info@dieseltech.mb.ca

LUNENBURG FOUNDRY
& ENGINEERING, LTD
53 Falkland Street
Lunenburg, NS B0J 2C0
902.634.8827
902.634.8886 fax (head office)
902.634.8889 fax (sales, parts
& service)
www.lunenburgfoundry.com

M-K POWER PRODUCTS
5641 McAdam Road
Mississauga, ON L4Z 1N9
905.890.5323
800.263.5011
905.890.6660 fax
800.430.0344 fax
www.m-k.com

WESTQUIP DIESEL SALES
(ALTA.) LTD
11720 - 181 Street
Edmonton, AB T5S 1M6
780.486.2645
780.486.2676 fax
gdumont@westquip.ca

** Branch Office

Pub # SL-4010-06
08/04

AUTHORIZED ISUZU DISTRIBUTOR DIRECTORY

Isuzu Motors Limited - Worldwide Distributor Network

Asia / Pacific

Japan	Isuzu Motors Limited 3-1, Kamigo, 4-Chome, Ebina Kanagawa-Ken, 243-0434, Japan (Non-Automotive Engines) Phone: 81-46-234-6180 Phone: 81-46-234-6093	Tawain	Leanmark Co. 9F-1, No.201 Sec 2 Keelung Road, Taipei, Taiwan Fax: 1437-0308

Europe

Belgium / The Netherlands	DBH Rivierdijk 452, 3372 BW Hardinxveld-Giessendam The Netherlands Phone: +31 184 613066 Fax: +31 184 618002		Division of MACME Boomsesteenweg 42B B-2630 Aartselaar Phone: +32-3-870-8180 Fax: +32-3-870-8188
Denmark	Holm-Denmark Sydvestvej 142-144 DK-2600 Glostrup Phone: +45-43-633700 Fax: +45-43-631403	Finland	Finmotor Palvitie 3 FIN-01390 Vantaa Phone: +35-8987-00970 Fax: +35-8987-009770
France	Penven 281, Chaussee Jules Cesar F-95250 Beauchamp Phone: 1-34135432 Fax: 1-39957659	Germany	Lopke Diesel Gmbh Ferdinand-Zeppelin-Strasse 19 47445 Moers Germany Phone: 0049 (0) 2841-99 90 445 Fax: 0049 (0) 2841-99 90 185
Greece	Petros Petropoulos S.A. Lera Odos 96-102 P.O.B. 41018 12210 Athens Phone: 347-3300 Fax: 347-3404	Italy	Pitteri Violini S.P.A. 20021 Baranzate de Bollate Milano, Via I Maggio, 25/57 Italy Phone: +39-02-382209-220 Fax: +39-02-3561674
Norway	Diesel Power A/S Industriveien 7, P.O.B. 144 N-3430 Spikkostad Phone: 3129-1940 Fax: 3129-1958	Portugal	Motolusa Estrada da Circunvalacao Portela da Ajuda P-1495 Lisboa Phone: 1214-241823 Fax: 1214-171927

AUTHORIZED ISUZU DISTRIBUTOR DIRECTORY

Isuzu Motors Limited - Worldwide Distributor Network

Spain

Transdiesel Div. de Casli, S.A.
c/Viguetas Castilla, 26
E-28820 Coslada - Madrid
Phone: 1-6737012
Fax: 1-6737412

Automoviles Utilitarios, S.A. (AUSA)
CRA.DE VIC, KM. 2,8 - P.O.B. 194
08240 Manresa, (Barcelona)
Phone: 93-874 7311
Fax: 93-874 1211

Sweden

Swed Motor AB
Box 4
S-13721 Vasterhaninge
Phone: 8-50012140
Fax: 8-50026800

Switzerland

Sterki AG
Zinkereistrasse 35
CH-8633 Wolfhausen
Phone: 55-253-2600
Fax: 55-253-2609

United Kingdom

HM Isuzu
Unit 5A, Babdown Airfield
Nr Tetbury, Gloucestershire GL8 8YL
United Kingdom
Phone: 44+1666500843
Fax: 44+1666500844 - FAX

Isuzu Motors Europe Limited
Suite 24, The Courtyards
Croxley Business Park
Hatters Lane, Watford
Hertfordshire, WD1 8YH
United Kingdom
Phone: 1923-231-580

Middle East

Oman

General Engineering Service Est.
C.R. 1/27447/3 P.O.B.5690
Ruwi, Sultanate Of Oman
Fax: +968-591802

U.A.E.

General Navigation
and Commerce
Company
Za'abeel Place Road
P.O. Box 5563, Dubai
Phone: +971-370065
Fax: +971-370308

Oceania

Australia

Isuzu Australia Limited
Building 1, Brooklyn Estate
77 Millers Road
Brooklyn, Victoria 3025
Australia
Phone: 61 3 9931 9977
Fax: 61 3 9315 2370

New Zealand

Holden New Zealand Limited
Plant No.1, Private Bag
Upper Hut
Phone: 4-528-1200
Fax: 4-528-1125

SERVICE & PARTS BULLETIN

SVS-21-07
8/9/2007

TO: ALL DISTRIBUTOR & DEALER SERVICE PERSONNEL

SUBJECT: J-SERIES ENGINE OIL FILL PROCEDURES

BACKGROUND INFORMATION

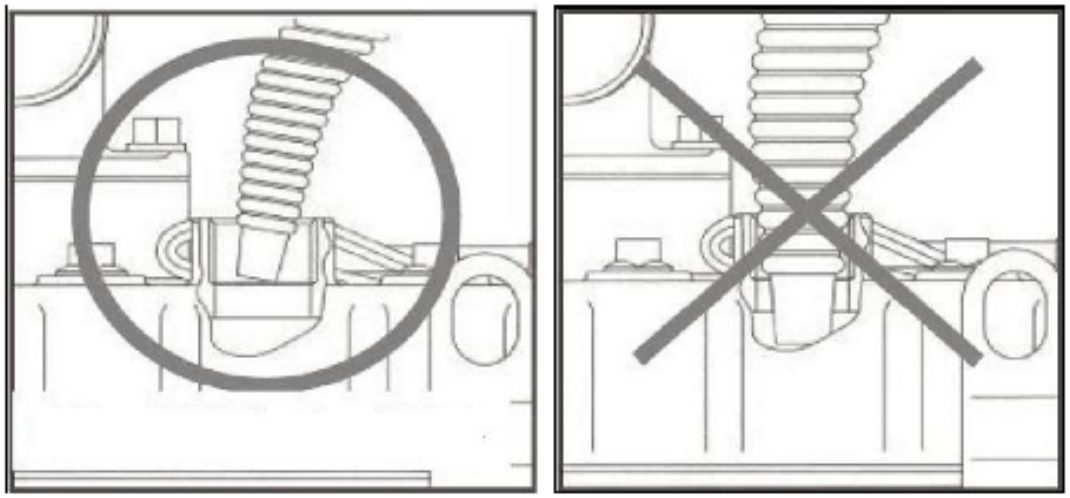
Improper engine oil fill rate and crankcase venting while filling may allow oil to enter the crank case ventilation system, intake manifold and combustion chamber, which may cause engine damage at startup.

ACTION REQUIRED

Follow the Oil Fill Procedure provided below, or refer to the appropriate engine Instruction Manual to prevent this non warrantable failure mode.

OIL FILL PROCEDURE

1. Before adding engine oil, remove the engine oil dipstick to provide crankcase ventilation.



2. Use an engine oil fill device that is smaller than the oil fill hole so that air is allowed to pass along the side of the oil fill hole.
3. Add engine oil slowly, at a rate that does not flood the valve cover. Be very careful when using automatic oil fill pumps; adjust to a slow rate if possible.
4. When changing the engine oil, add the exact amount specified in the manual.
5. Allow 10-20 minutes for the oil to drain into the oil pan. Confirm this by checking the oil level with the dip stick (repeatedly) until it stabilizes.

SERVICE & PARTS BULLETIN

6. Check if the oil level is low, accounting for the oil filter oil capacity.
7. If the oil is low, oil may have entered the Closed Crankcase Ventilation (CCV) system and into the intake manifold and cylinder. If so, the oil must be removed before cranking the engine.

PROCEDURE FOR EVACUATING OIL FROM THE CCV SYSTEM

1. If oil entered the CCV system, it may be found in the intake manifold. Remove the intake manifold for verification.
2. Oil that has entered the CCV system can be removed from the cylinders by removing all fuel injection nozzles and turning the engine with the starter until all oil is exhausted from the cylinders.

If you should have any questions please contact your service and parts representative.

Best Regards,

The **ISZAPT** *Service & Parts Team*

WARNING – DO NOT USE JET A FUEL IN THIS ENGINE. ANY USE OF JET A FUEL WILL VOID THE WARRANTY ON THE ENGINE AND WILL RESULT IN VIOLATION OF EPA EMISSIONS REGULATIONS

NOTES:

SERVICE PARTS ILLUSTRATIONS & DETAIL

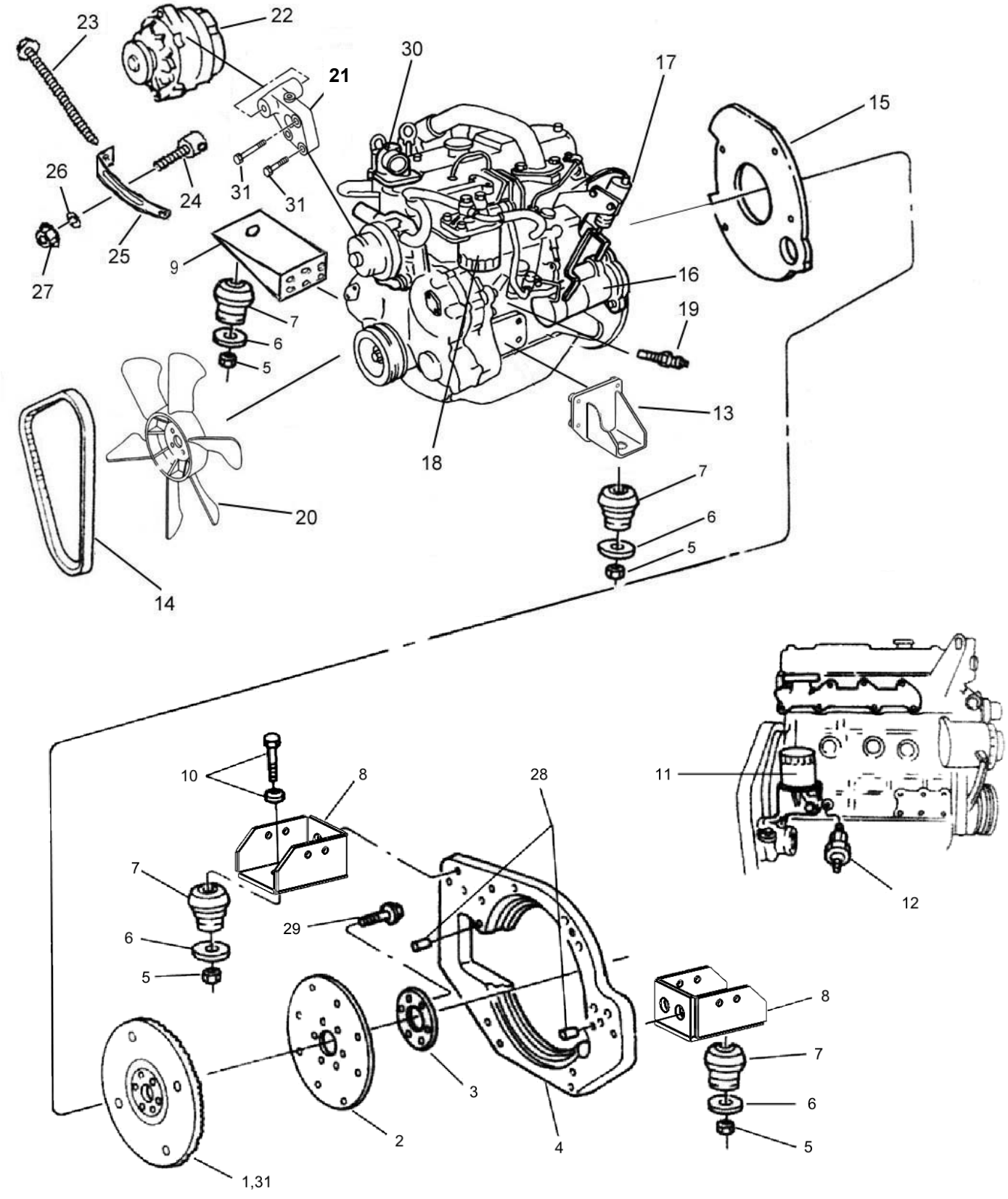
IDENTIFICATION KEY

The following abbreviations are used throughout the parts lists in this section.

Abbreviation	Meaning	Purpose
NL	Not Listed	Part required but not shown on diagram
NPN	No Part Number	Parts shown and numbered, but not stocked and sold by Eagle. Typically used for bolts, clamps, etc…
AR	As required	

POWER TRAIN

ENGINE DRESS—ISUZU TURBO DIESEL



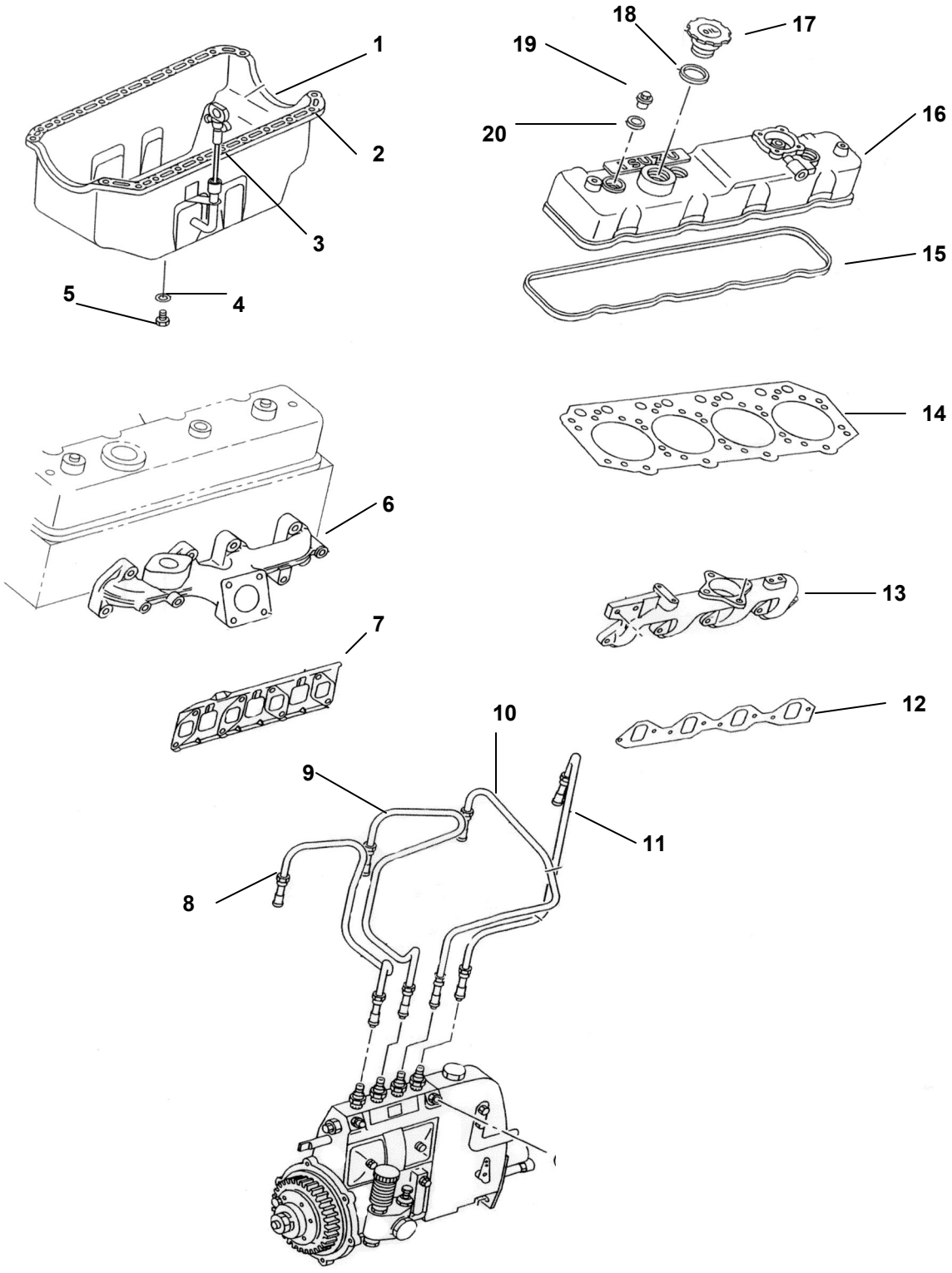
POWER TRAIN

ENGINE DRESS—ISUZU TURBO DIESEL—DETAIL

Item	Part Number	Qty	Description
1	B-TT10TD-00017-1	1	FLYWHEEL
2	B-TT10TD-00016-ID	1	FLEX PLATE
3	TM27C00305-ID	1	FLEX PLATE WASHER
4	B-TT10TD-00001-ID	1	TRANS PLATE
5	NPN	4	3/4" LOCK NUT
6	A-TT5D-00010	4	LORD WASHER
7	A-TT5D-00013-1	4	ISOLATOR
8	A-TT4-00011	2	TRANS MOUNT
9	B-TT5D-00009	1	ENGINE MOUNT
10	NPN	4	3/4-16X3.5 BOLT & 3/4" WHASHER
11	8-94430-983-1	1	OIL FILTER ELEMENT
12	A-TT4-000651	1	OIL PRESSURE SENDING UNIT
13	8971138000	1	ISUZU MOTOR MOUNT
14	1136714360 or 1136710081	1	BELT
15	TMD27B00521-ID	1	ENGINE PLATE
16	8970848770	1	STARTER
17	X143301540	1	SOLENOID
18	8-94414-796-3	1	FUEL FILTER ELEMENT
19	A-TT4-000652	1	COOLANT TEMP SENDING UNIT
20	5136603081	1	FAN
21	894423-7450	1	ALTERNATOR BRACKET
22	5812003470	1	ALTERNATOR - 50AMP
23	8943881780	1	BOLT, ALT
24	8970862281	1	SLIDING ADJUSTMENT BOLT
25	8971842640	1	ALTERNATOR ADJUSTING BRACKET
26	1099851770	1	LOCK WASHER, ALT
27	9091105080	1	NUT, ALT
28	5240849	2	DOWEL PINS
29	13MM-ID	8	M-13 BOLTS
30	8972072-2321	1	THERMOSTAT HOUSING 90 DEG
30	897217-8270	1	THERMOSTAT HOUSING STRAIGHT (NOT SHOWN)
NL	8973756480	1	WATER PUMP
NL	8972112090	1	THERMOSTAT
NL	894365-6741	1	THERMOSTAT GASKET
NL	8970908790	1	THERMOSTAT HOUSING GASKET

POWER TRAIN

ENGINE DRESS—ISUZU TURBO DIESEL



POWER TRAIN

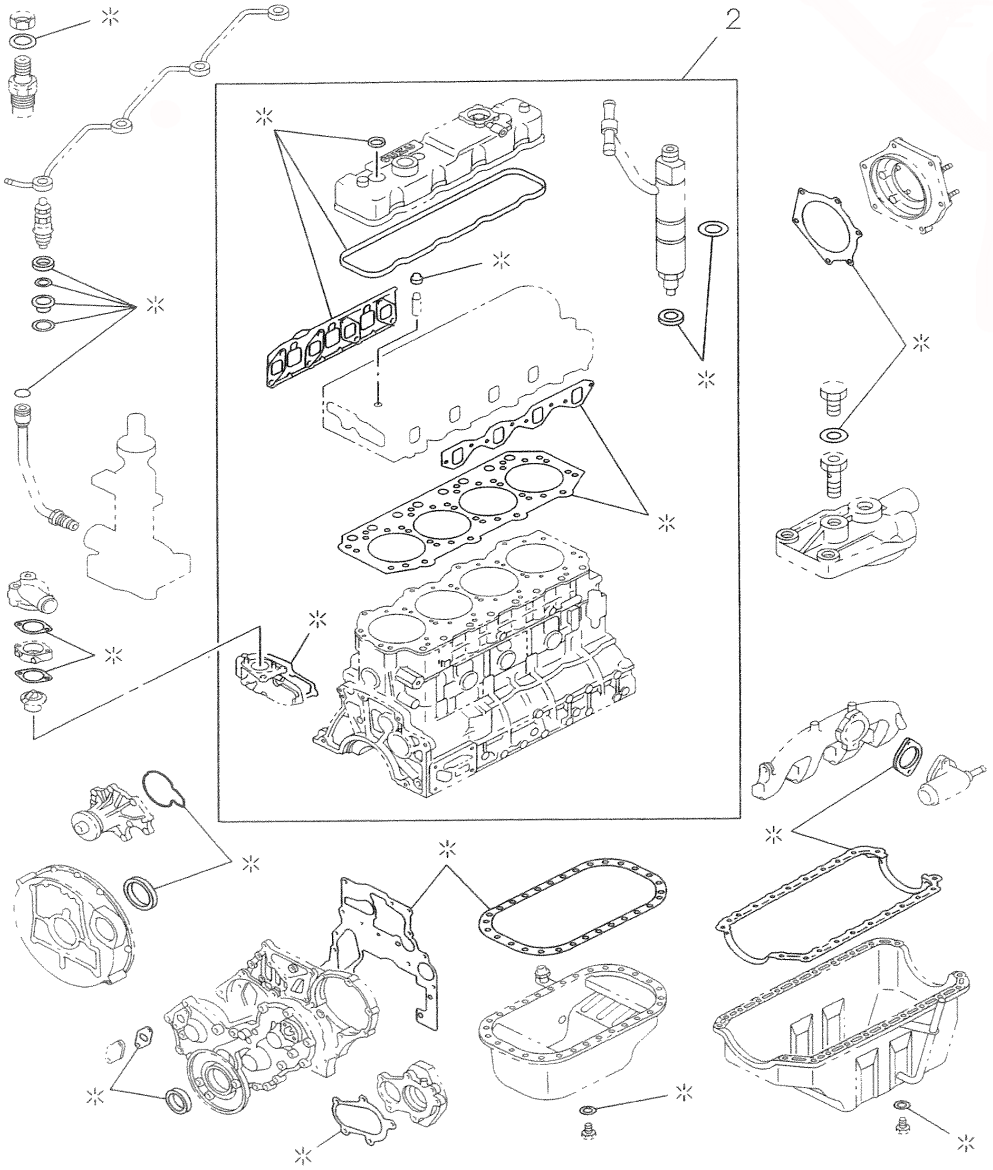
ENGINE DRESS—ISUZU TURBO DIESEL—DETAIL

Item	Part Number	Qty	Description
1	8972539921	1	OIL PAN
2	8970801940	1	OIL PAN GASKET
3	8972457681	1	OIL LEVEL GAUGE
4	1096230570	1	GASKET, DRAIN PLUG
5	9096620120	1	DRAIN PLUG
6	8970394733	1	EXHAUST MANIFOLD
7	8973503170	1	GASKET, EXHAUST MANIFOLD
8	8972389800	1	#1 FUEL INJECTION LINE
9	8972389810	1	#2 FUEL INJECTION LINE
10	8972389820	1	#3 FUEL INJECTION LINE
11	8972389830	1	#4 FUEL INJECTION LINE
12	8972125400	1	GASKET, INTAKE MANIFOLD
13	8970114882	1	INTAKE MANIFOLD
14	8970661980	1	GASKET, CYLINDER HEAD
15	8973494160	1	GASKET, CYLINDER HEAD COVER
16	8970817422	1	CYLINDER HEAD COVER
17	8941332075	1	OIL FILLER CAP
18	8941236231	1	GASKET, OIL FILLER CAP
19	8941581080	1	CAP, HEAD COVER
20	8942024563	1	GASKET, CAP HEAD COVER

POWER TRAIN

ENGINE DRESS—ISUZU TURBO DIESEL

1 *Includes all gaskets with asterisk



POWER TRAIN

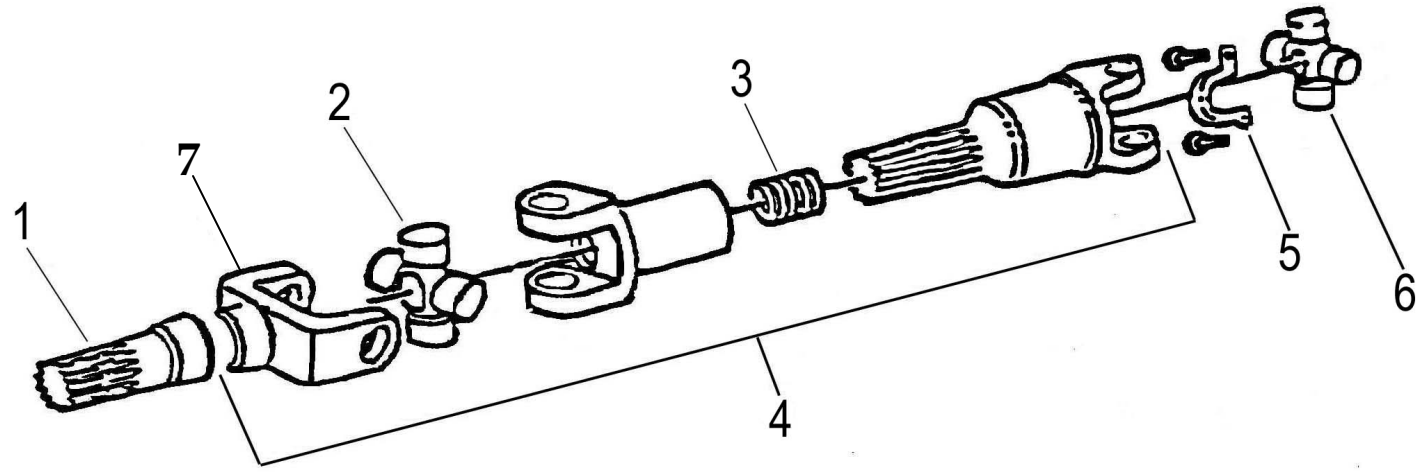
ENGINE DRESS—ISUZU TURBO DIESEL—DETAIL

Item	Part Number	Qty	Description
1	5878142701	1	ENGINE OVERHAUL GASKET SET
2	5878140221	1	ENGINE HEAD OVERHAUL GASKET SET

***Item 1 includes all gaskets with asterisk in items 1 and 2**

DRIVELINE

DRIVE SHAFT ASSEMBLY—FRONT

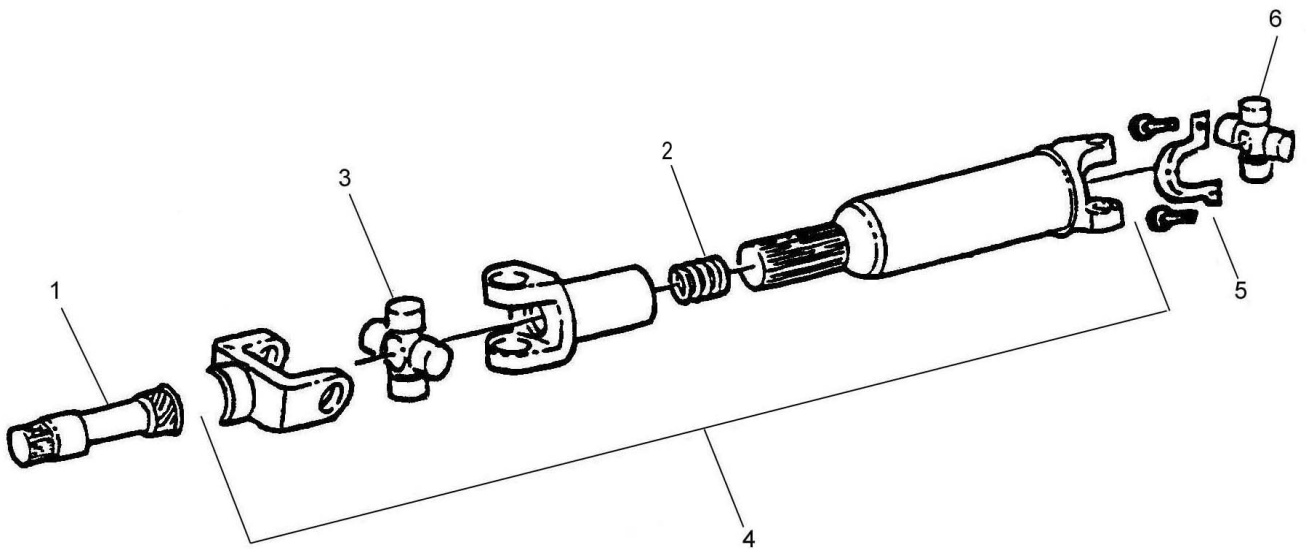


DRIVE SHAFT ASSEMBLY— FRONT DETAIL

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A-TT8-00201-1	1	TRANSMISSION OUTPUT YOKE SHAFT-FRONT
2	A-TT4-00132-1	1	CROSS BEARING FRONT D/S NEW STYLE
3	A-TT4-00134	1	DRIVE SHAFT SPRING
4	A-TT10-00202-2	1	DRIVE SHAFT
5	A-TT4-00130	2	END YOKE STRAP AND BOLT KIT
6	A-TT4-00137	1	CROSS BEARING FRONT D/S NEW STYLE
7	2-4-1921	1	END YOKE

DRIVELINE

DRIVESHAFT ASSEMBLY—REAR

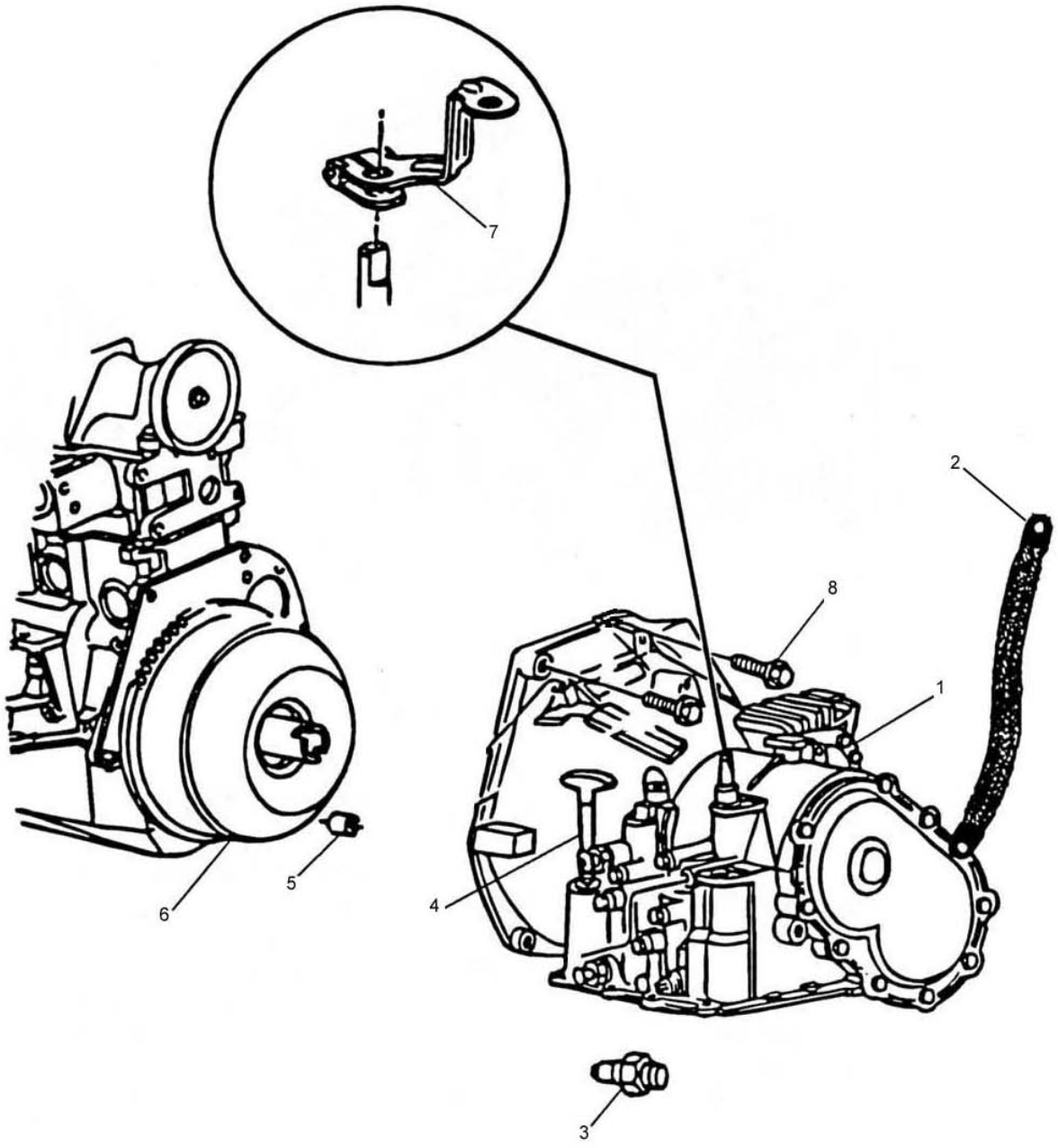


DRIVE SHAFT ASSEMBLY—REAR DETAIL

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A-TT8-00201-2	1	TRANSMISSION OUTPUT YOKE SHAFT-REAR
2	A-TT4-00134	1	DRIVE SHAFT SPRING
3	A-TT4-00132-1	1	CROSS BEARING FRONT D/S NEW STYLE
4	AB-TT10D-00130-3	1	DRIVE SHAFT
5	A-TT4-00130	2	END YOKE STRAP KIT
6	A-TT4-00137	1	CROSS BEARING REAR D/S NEW STYLE

TRANSMISSION

TRANSAXLE MOUNTING & MISC. PARTS



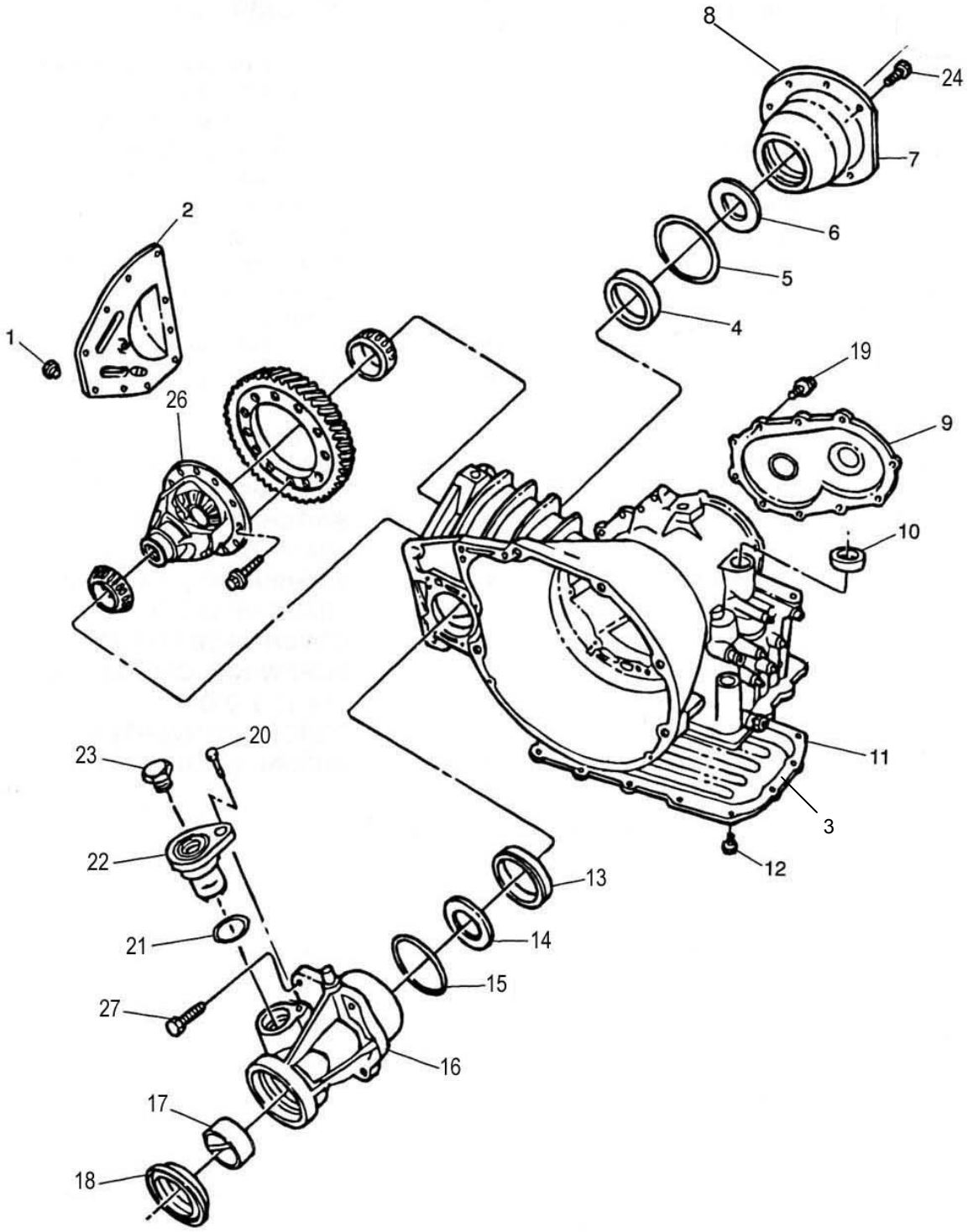
TRANSMISSION

TRANSAXLE MOUNTING & MISC. PARTS DETAIL

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A-TT5D-0018-1	1	TRANSAXLE
2	A-TN4-00707	1	GROUND STRAP
3	3747361	1	SWITCH-NEUTRAL STARTER & BACK UP LIGHT
4	4856444	1	INDICATOR-TRANSAXLE FLUID
5	5240849	2	DOWEL PIN-TRANSAXLE TO ENGINE ALIGNMENT
6	TT582YTTLS	1	TORQUE CONVERTER
7	A-TT4-00419	1	TRANSAXLE SHIFT LEVER-MANUAL CONTROL
8	NPN	5	SCREW-HEX CAP-WITH WASHER M12-1.75 X 30
9	85705	1	GASKET & FILTER MAINTENANCE PACKAGE

TRANSMISSION

TRANSAXLE CASE EXTENTION & RETAINER—ALL WHEEL DRIVE



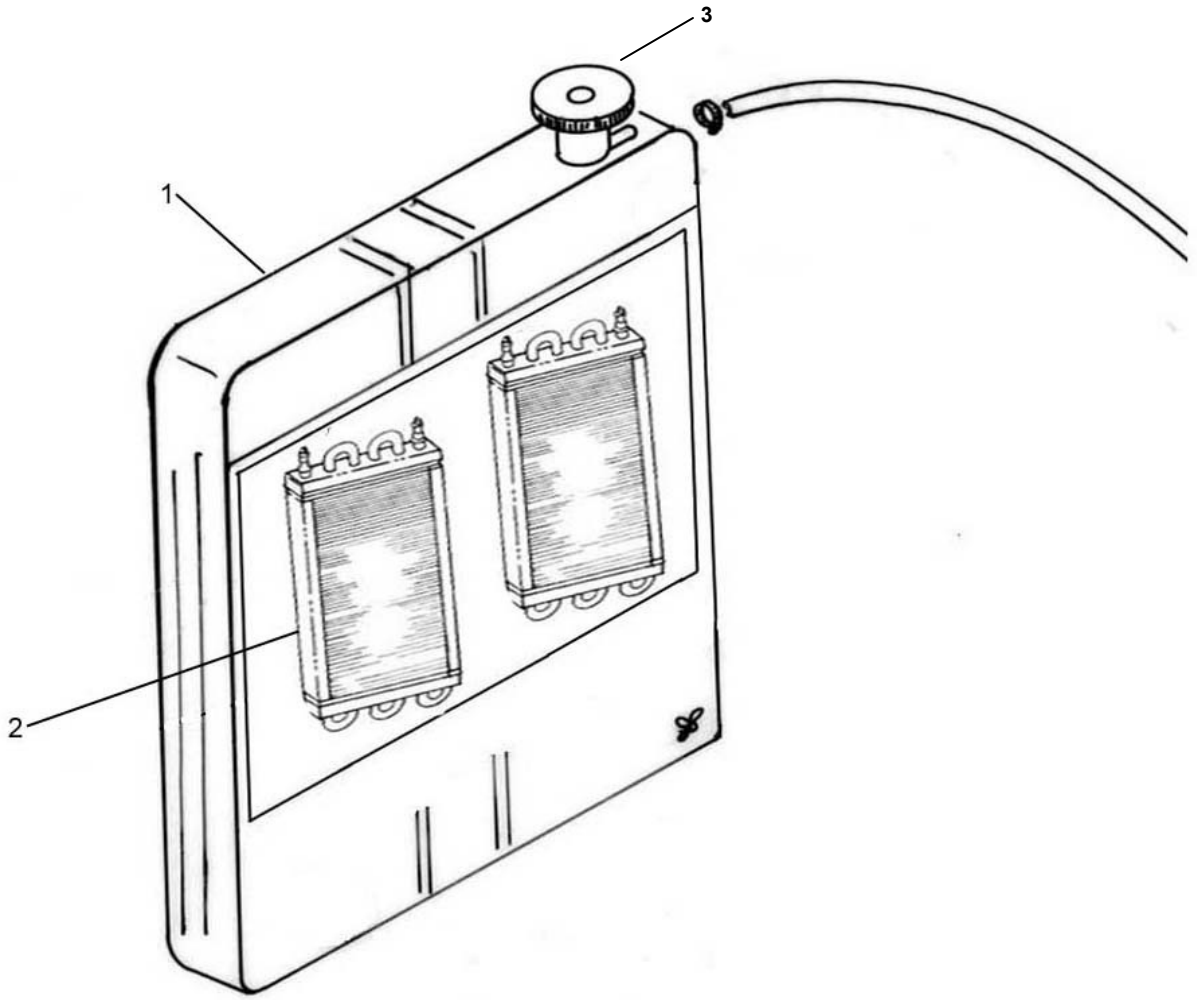
TRANSMISSION

TRANSAXLE CASE EXTENSION & RETAINER—ALL WHEEL DRIVE - DETAIL

Item	Part Number	Qty	Description
1	6501474	10	SCREW-HEX CAP-W/ WASHER M8-1.25 X 16
2	4471573	1	PAN
3	82180	1	GASKET (USE SILICONE ADHESIVE)
4	NPN	1	CUP(NOT SOLD SEPARATELY)
5	4504568	1	SPACER KIT
6	4269787	1	RETAINER, OIL
7	4567493	1	RETAINER, BEARING
	6500368	6	SCREW-HEX CAP-M8 X 1.25 X 23
8	4412522	1	SEAL, DIFFERENTIAL BRG.RET
9	4659342	1	COVER, TRANS. END
	82180	1	GASKET (USE SILICONE ADHESIVE)
	6501474	10	SCREW-HEX CAP W/WASHER M8-1.25 X 16
10	3878447	1	SEAL, MANUAL VALVE SHAFT
11	4471573	1	PAN, TRANSAXLE OIL
12	6101285	1	SCREW-HEX CAP-W/ WASHER M6-1 X 16
13	4567022	1	CUP
14	4567494	1	RETAINER
15	6500111	1	O-RING
16	4549219	1	OUT PUT HOUSING
	6500511	4	SCREW-HEX CAP-W/ WASHER M8-1.25 X 33
17	NPN	1	BUSHING (SERVICED IN EXT.)
18	4412522	1	SEAL
19	6501474	10	SCREW-HEX CAP M8-1.25 X 15
20	NPN	1	SCREW-HEX CAP-WASHER HEAD M6-1.0 X
21	5212151	1	O-RING
22	4295857	1	SPEEDOMETER CABLE ADAPTOR
23	NPN	1	SCREW-FLAT HEAD HEX SOCKET M8-1.25 X
24	NPN	6	SCREW-HEX CAP-WASHER HEAD M8-1.25 X
26	A-TT5D-00021	1	DIFFERENTIAL-WELDED SPIDER GEAR
27	NPN	4	SCREW-HEX CAP WASHER HEAD M8-1.25 X

TRANSMISSION

COOLING SYSTEM— TRANSMISSION

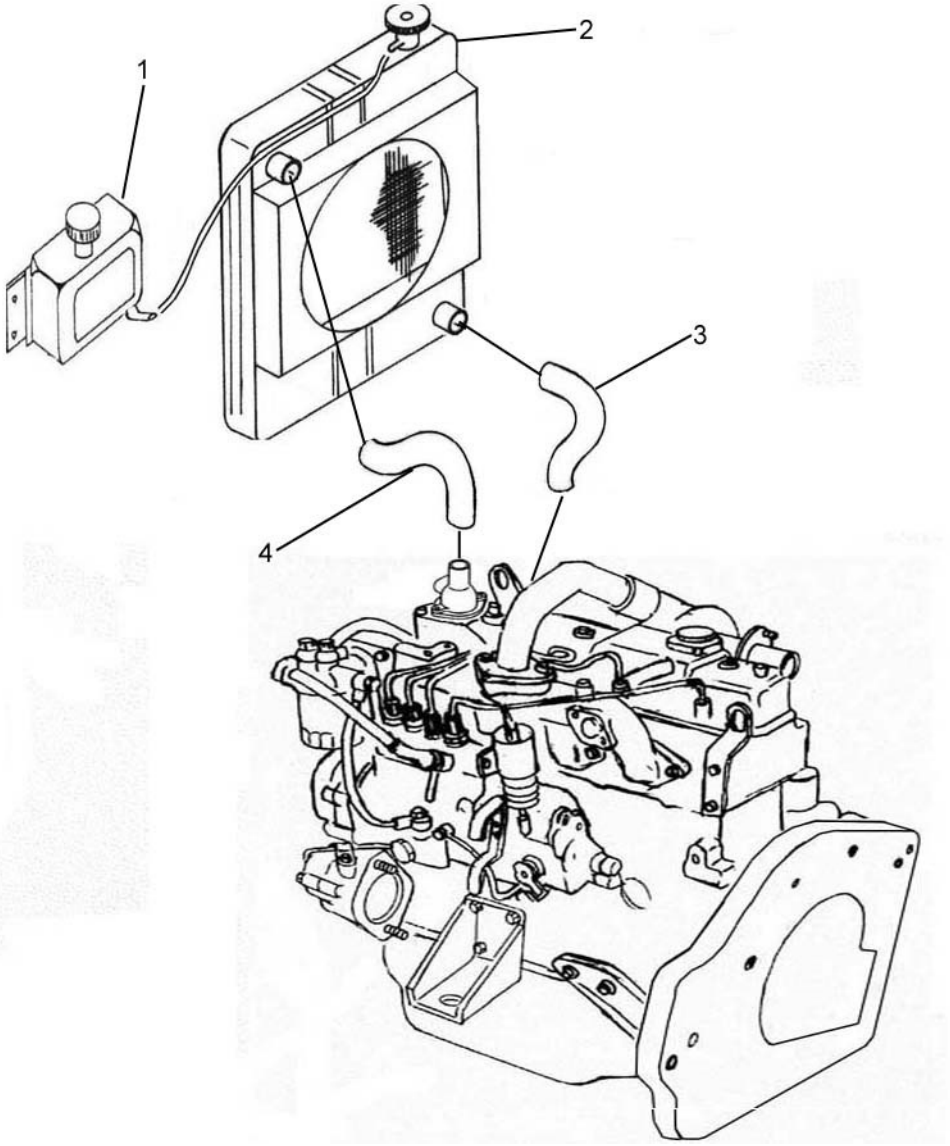


COOLING SYSTEM—TRANSMISSION DETAIL

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	B-TT10TD-00311-1	1	RADIATOR
2	A-TT4-00221-1	2	TRANSMISSION COOLER
3	31333	1	RADIATOR CAP

COOLING SYSTEM

COOLING SYSTEM—TURBO DIESEL

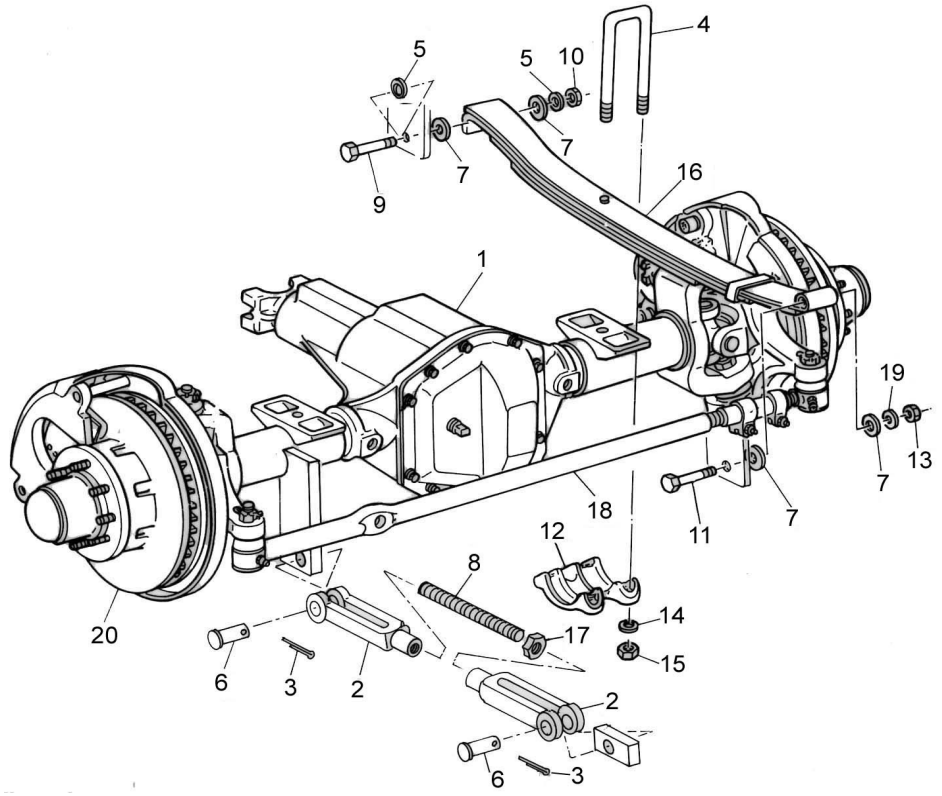


COOLING SYSTEM—TURBO DIESEL—DETAIL

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A-TT10TD-00322	1	SURGE TANK
2	B-TT10TD-00311-1	1	RADIATOR
3	A-TT10-00323	1	BOTTOM RADIATOR HOSE
4	A-TT10-00323-1	1	TOP RADIATOR HOSE

AXLES

AXLE ASSEMBLY—FRONT DRIVE (ALL WHEEL DRIVE)

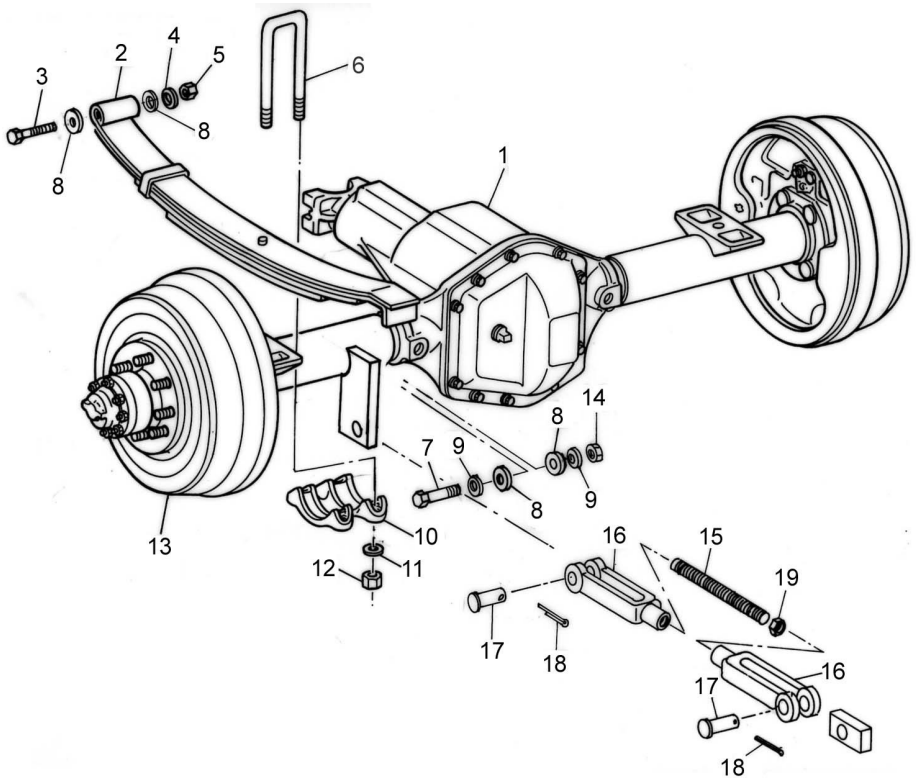


AXLE ASSEMBLY—FRONT DRIVE—DETAIL

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A-TT10-00371	1	FRONT DRIVE AXLE ASSEMBLY
2	A-TT10-00128	4	CLEVIS
3	NPN	4	COTTER PIN
4	A-TT10-00119	4	U BOLT 5/8-18 TREAD
5	NPN	4	WASHER FLAT 3/8
6	A-TT10-00129	4	CLEVIS-PIN
7	A-TT4-00119	6	WASHER-NYLON
8	NPN	2	THREADED ROD
9	NPN	2	SCREW HEX CAP 3/8-16 X 3-1/2
10	NPN	2	NUT HEX LOCK 3/8-16
11	NPN	2	SCREW HEX CAP 9/16-18 X 3 1/2
12	A-TT10-00118	2	AXLE CLAMP PLATE
13	NPN	2	NUT HEX LOCK 9/16-18
14	A-TT4-00366	8	WASHER, U-BOLT
15	A-TT4-00365	8	NUT, U BOLT
16	A-TT10-00116	2	LEAF SPRING
17	A-TT4-00407	4	JAM NUT
18	044TR115-24X	1	TIE ROD ASSEMBLY
19	NPN	2	WASHER FLAT 9/16

AXLES

AXLE ASSEMBLY— REAR

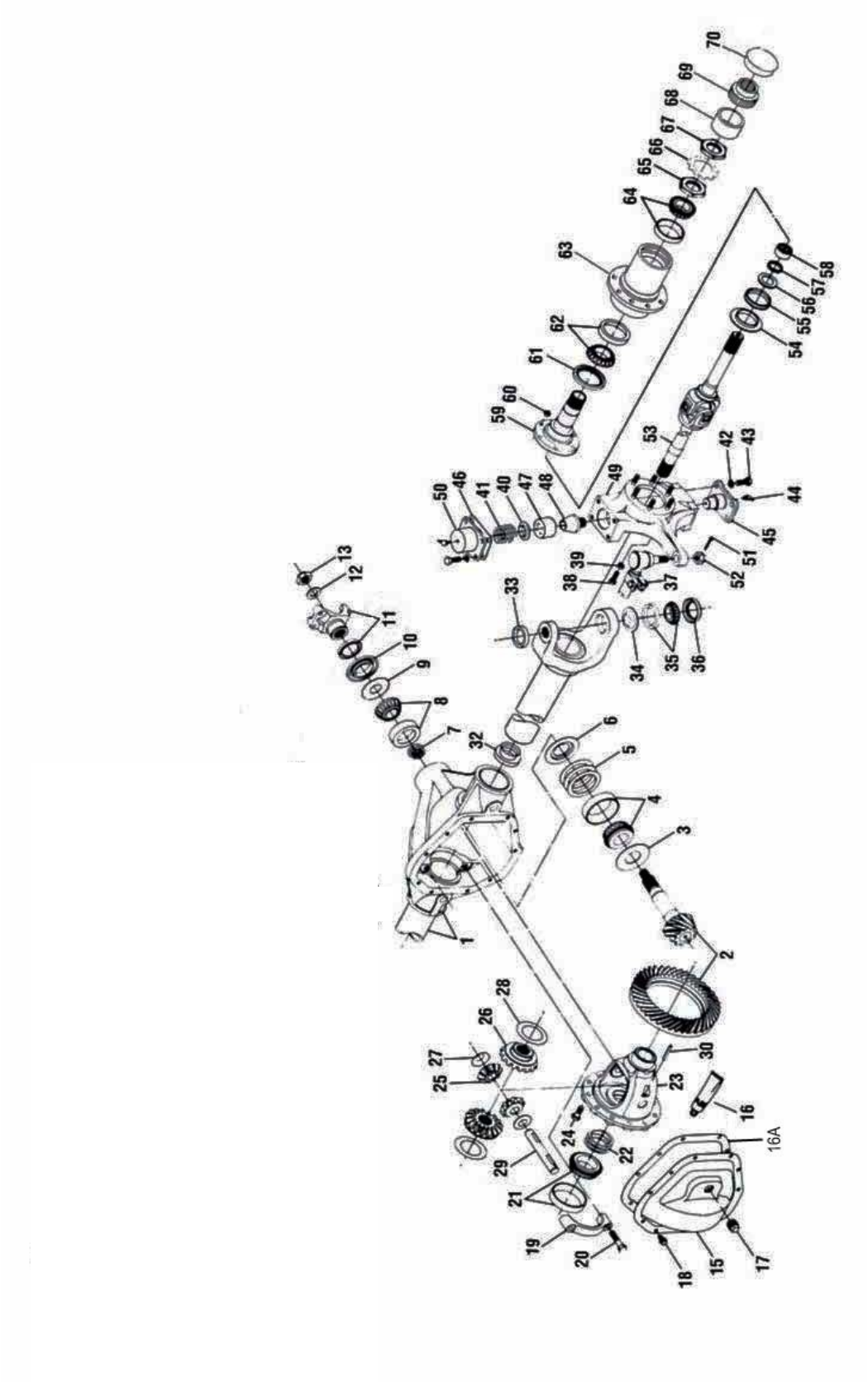


AXLE ASSEMBLY—REAR—DETAIL

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A-TT10-00361	1	AXLE ASSEMBLY REAR DRIVE
2	A-TT10-00116	2	LEAF SPRING
3	NPN	2	SCREW-HEX CAP 9/16-18 X 3 1/2 GR8
4	NPN	2	WASHER-FLAT 9/16-18
5	NPN	2	NUT-LOCK 9/16-18
6	A-TT10-00119	4	U-BOLT 5/8-18 THREAD
7	NPN	4	SCREW-HEX CAP 3/8-16 X 2-1/2
8	A-TT4-00119	6	WASHER-NYLON
9	NPN	4	WASHER-FLAT 3/8
10	A-TT4-00363	2	AXLE CLAMP PLATE
11	A-TT4-00366	8	WASHER FLAT SPECIAL 3/16" THICK
12	A-TT4-00365	8	NUT-HEX-HIGH SPECIAL 5/8-18
13	070HU247X	2	BRAKE DRUM-REAR
14	NPN	2	NUT-HEX-LOCK 3/8-16
15	NPN	2	THREADED ROD
16	A-TT10-00128	4	CLEVIS
17	A-TT10-00129	4	CLEVIS PIN
18	NPN	4	COTTER PIN
19	A-TT4-00407	4	JAM NUT

AXLES

AXLE ASSEMBLY BREAKDOWN—FRONT DRIVE (ALL WHEEL DRIVE)



AXLES

AXLE ASSEMBLY BREAKDOWN—FRONT DRIVE (ALL WHEEL DRIVE)

Item	Part Number	Qty	Description
1	A-TT10-00371	1	COMPLETE AXLE ASSEMBLY
2	706999-14X	1	GEAR & PINION ASSEMBLY
3	*SEE KIT	1	SLINGER-PINION OIL INNER
4	706060X	KIT	INNER PINION BEARING
5	*SEE KIT	KIT	SHIM-PINION ADJUSTING
6	*SEE KIT	1	BAFFLE-PINION OIL
7	*SEE KIT	KIT	SHIM-PINION BEARING ADJUSTING
8	706045X	KIT	OUTER PINION BEARING
9	*SEE KIT	1	SLINGER-PINION OIL OUTER
10	35725	1	SEAL-OIL
11	345731X	1	END YOKE ASSY
12	30275	1	WASHER-PINION NUT
13	30271	1	NUT-PINION
15	73591X	1	COVER - CARRIER
16	82180	1	RTV SEALANT
16A	39697	1	GASKET
17	36472	1	PLUG-PIPE SQ DRIVE
18	34822	10	SCREW-FLANGE HD
19	NOT SOLD SEPERATELY	2	CAP DIFFERENTIAL BEARING
20	500400-20	2	1/2-13 X 2.25 GRD8 HEX BOLT
21	706047X	KIT	DIFFERENTIAL BEARING
22	*SEE KIT	KIT	DIFFERENTIAL SHIM
23	*SEE KIT	1	CASE-DIFFERENTIAL ASSY
24	30266	10	SCREW-HEX
25	*SEE KIT	2	PINION-DIFFERENTIAL
26	*SEE KIT	2	GEAR-DIFFERENTIAL KIT
27	*SEE KIT	2	THRUST WASHER DIFFERENTIAL PINION
28	*SEE KIT	2	THRUST WASHER DIFFERENTIAL GEAR
29	*SEE KIT	1	SHAFT-DIFFERENTIAL
30	500598-22	1	PIN-ROLL
31	16979	1	VENT PLUG
32	37275	2	SEAL & GUIDE-SHAFT
33	SEE KIT 706395-X	2	SEAL-KING PIN
34	SEE KIT 706395-X	2	RETAINER
35	SEE KIT 706395-X	2	BEARING KING PIN
36	41777	1	OIL SEAL
37	044TR115-24X	2	TIE ROD ASSY
38	31026-3	2	BOLT STOP
39	05QE	2	JAM NUT
40	620180	2	RETAINER- COMPRESSION SPRING
41	37300	2	COMPRESSION SPRING
42	500357-13	8	LOCK WASHER
43	500412-12	8	BOLT-KING PIN BEARING CAP
44	500175-1	2	FITTING - LUBRICATION
45	37299	2	KING PIN CAP
46	37307	2	GASKET - KING PIN CAP
47	41886	2	BUSHING - KING PIN
48	37302	2	KING PIN
49	73948-X	1	(3)RIGHT HAND STEERING KNUCKLE

AXLES

AXLE ASSEMBLY BREAKDOWN—FRONT DRIVE—DETAIL

49	070SK193-X	1	(3)LEFT HAND STEERING KNUCKLE
50	620132	2	CAP - KING PIN BEARING
51	500024-5	2	COTTER PIN
52	34800	2	NUT
53	907967-5	2	(1) SHAFT AND JOINT ASSY 30 TOOTH
53	909218-7	2	(1) SHAFT AND JOINT ASSY 35 TOOTH
54	37308	2	SLINGER
55	37311	2	OIL SEAL
56	*SEE KIT	2	SPACER
57	*SEE KIT	2	SEAL
58	*SEE KIT	2	BEARING ASSY - NEEDLE
59	*SEE KIT	2	WHEEL BEARING SPINDLE ASSY
60	36880	12	SPINDLE NUT
61	37729	2	SEAL
62	706411X	2	INNER WHEEL BEARING
63	060HU109-X	2	WHEEL HUB
64	706074X	2	OUTER WHEEL BEARING
65	35270	2	NUT
66	35269	2	LOCK-WHEEL BEARING ADJUSTING NUT
67	35270	2	NUT
68	37997	2	SPACER - DRIVE GEAR
69	37994	2	GEAR - DRIVE
70	37996	2	HUB CAP
KIT	706999-14X	KIT	DRIVE GEAR AND PINION ASSY INCLUDES 2-10, 12,13,16,22,24
KIT	72162X	KIT	DRIVE GEAR AND PINION INCLUDES 2,13
KIT	706602X	KIT	DIFFERENTIAL PARTS (STANDARD) 16,24-30
KIT	706601X	KIT	DIFFERENTIAL PARTS (LIMITED SLIP) INCLUDES 16,24,74-81
KIT	706354X	KIT	DIFFERENTIAL DISC AND PLATES(LIMITED SLIP) INCLUDES 78-81
KIT	706603X	KIT	PINION AND BEARING ADJUSTING SHIMS INCLUDES 5,7,12,13,16
KIT	706604X	KIT	DIDDERENTIAL ADJUSTING SHIMS INCLUDES 16,22
KIT	706605X	KIT	DIFFERENTIAL AND PIONION SHIMS 5,7,12,13,16,22
KIT	700013	KIT	SPINDLE ASSY INCLUDES 55-58
KIT	700014	KIT	SPINDLE SEAL AND BEARING INCLUDES 55-58

NOTES:

(1) Due to engineering change by Dana axles. Your tug may have either a 30 or 35 tooth shaft and joint assembly. All tugs with continental engines will have 909218-7 (35 tooth). It may be necessary for you to count the teeth on your shaft and joint assembly to correctly identify the part you require.

RECOMMENDED TORQUE SPECIFICATIONS DANA 70 AXLE

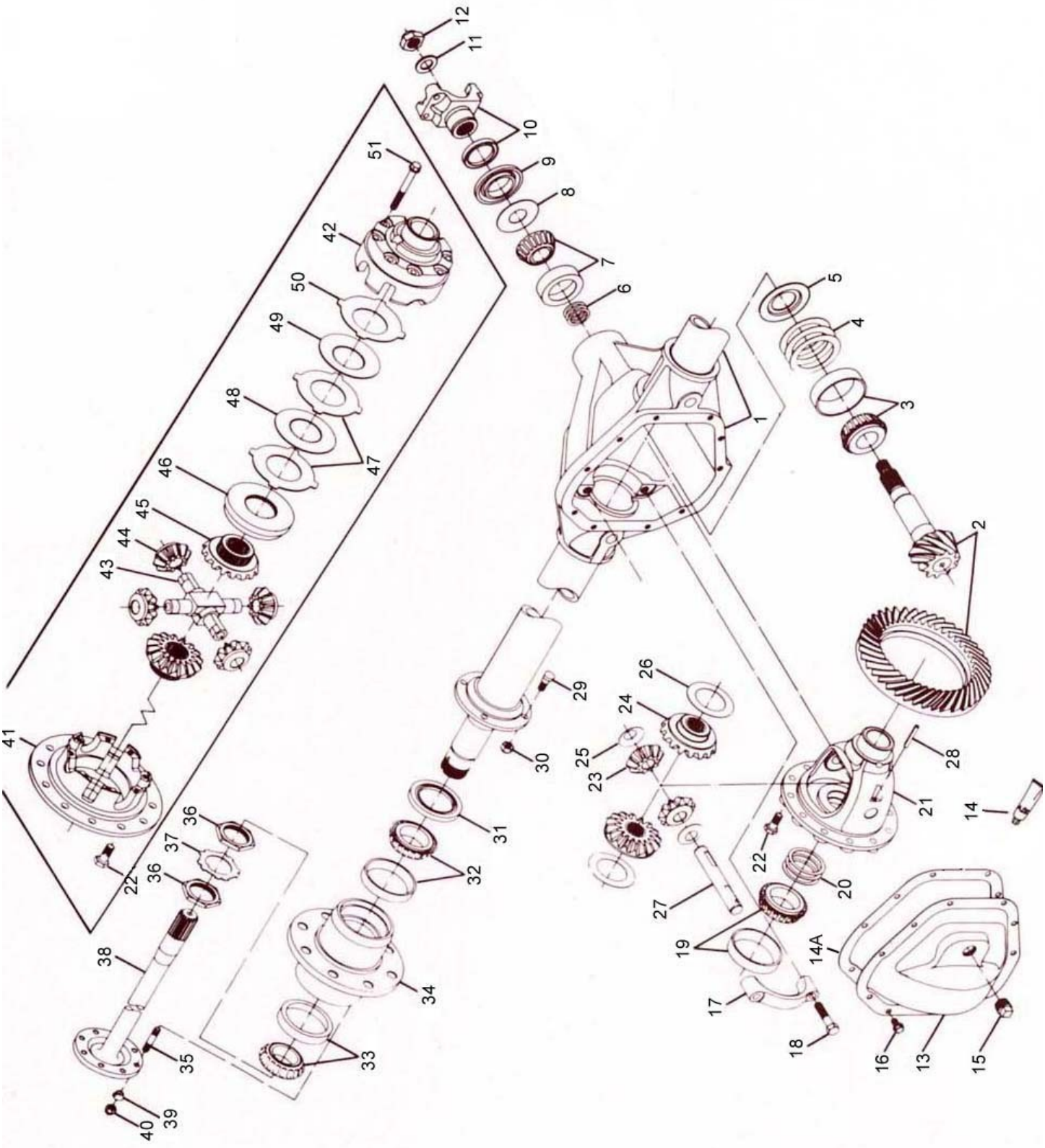
POSITION	THREAD	WRENCH TORQUE (LBS.-FT)
Drive Pinion Nut	7/8 - 14	240-300
Differential Bearing Cup Cap Screws	1/2 - 13	70-90
Ring Gear Cap Screws	1/2 - 20	100-120
Cover Screws	3/8 - 16	30-40
Differential Case Cap Screws	7/16 - 14	55-75
Brake Retainer Nuts	1/2 - 20	100-110
Axle Shaft Flange Nuts	7/16 - 20	64-70
Upper Kingpin	1 1/8 - 12	500-600
Kingpin Cap Cap Screws	1/2 - 20	70-90
Spindle Mounting Nuts	1/2 - 20	60-80
Tie Rod Stud Nut	5/8 - 18	70 Min (2)
Tie Rod Clamp Nuts	1/2 - 20	35-45
Steering Arm Nuts	1/2 - 20	70-90
Steering Arm Stop Screw & Jam Nut	1/2 - 20	10-20

(2) Note—If cotter pin cannot be installed after minimum torque is attained, the nut must be advanced until cotter pin can be installed.

(3) When replacing steering knuckles be sure that upon installation your steering cylinders (see pages 48-51) must be adjusted so when in full turn to the right and them full turn to the left the cylinder does not pull steering arm more than 3/16 of an inch. If you have any questions please call Eagle Tugs technical department.

AXLES

AXLE ASSEMBLY BREAKDOWN—REAR DRIVE



*41-51 Special order limited slip kit call EAGLE for replacement

AXLES

AXLE ASSEMBLY BREAKDOWN—REAR DRIVE—DETAIL

Item	Part Number	Qty	Description
1	A-TT10-00361	1	COMPLETE AXLE ASSEMBLY
2	72165-5X	KIT	DRIVE GEAR & PINION
3	706060X	KIT	INNER PINION BEARING
4	*SEE KIT	KIT	SHIM-DRIVE PINION ADJUSTING
5	34849	1	BAFFLE-PINION BEARING
6	*SEE KIT	KIT	SHIM-PINION BEARING ADJUSTING
7	706045X	KIT	OUTER PINION BEARING
8	39238	1	SLINGER-PINION BEARING
9	38427	1	SEAL-PINION
10	345731X	1	END YOKE ASSEMBLY
11	30275	1	WASHER-PINION NUT
12	30271	1	NUT-PINION
13	73591-X	1	COVER ASSEMBLY
14	82180		RTV SEALANT
14A	39697	2	GASKET
15	98785	1	PLUG-PIPE SLOTTED
16	36472	10	SCREW-FLANGE HD
17	N/A	1	CAP DIFFERENTIAL BEARING
18	500400-20	2	1/2-13 x 2.25 GRD8 BOLT BEARING CAP
19	706047X	KIT	BEARING
20	*SEE KIT	KIT	SHIM-DIFFERENTIAL BEARING
21	*SEE KIT	KIT	CASE-DIFFERENTIAL
22	30266	KIT	BOLT-DRIVE GEAR
23	*SEE KIT	KIT	PINION-DIFFERENTIAL
24	*SEE KIT	KIT	GEAR-DIFFERENTIAL
25	*SEE KIT	KIT	THUST WASHER-PINION
26	*SEE KIT	KIT	THRUST WASHER-GEAR
27	*SEE KIT	KIT	SHAFT-DIFFERENTIAL
28	500598-22	1	LOCK-DIFFERENTIAL
29	33694	8	BOLT-BRAKE MANUFACTURING
30	36880	8	NUT-BRAKE MANUFACTURING
31	35256	2	SEAL-OIL
32	706073X	KIT	INNER WHEEL BEARING
33	706074X	KIT	OUTER WHEEL BEARING
34	070HU247-X	2	HUB & DRUM ASSEMBLY
35	36847	8	STUD-HUB
36	35270	4	NUT-SPINDLE
37	35269	2	LOCK WASHER WHEEL BEARING
38	070SR124-1	2	SHAFT-AXLE FLANGE LONG
39	31534	16	ADAPTER-STUD
40	36805	24	NUT-LOCK
	16979	1	VENT
KIT	706603X	2	PINION & BEARING ADJ SHIMS 4,6,11,12,14
KIT	706609X	2	DIFFERENTIAL CASE ASSY (STAND) 14,19-28

AXLES

AXLE ASSEMBLY BREAKDOWN—REAR DRIVE—DETAIL

Item	Part Number	Qty	Description
41	SEE KIT LIMITED SLIP	1	FLANGE HALF - DIFFERENTIAL CASE
42	SEE KIT LIMITED SLIP	1	CAP HALF - DIFFERENTIAL CASE
43	SEE KIT LIMITED SLIP	1	SHAFT - DIFFERENTIAL
44	SEE KIT LIMITED SLIP	1	PINION - DIFFERENTIAL
45	SEE KIT LIMITED SLIP	1	GEAR - DIFFERENTIAL
46	SEE KIT LIMITED SLIP	1	RING - DIFFERENTIAL GEAR
47	SEE KIT LIMITED SLIP	1	PLATE - DIFFERENTIAL
48	SEE KIT LIMITED SLIP	1	DISC - DIFFERENTIAL
49	SEE KIT LIMITED SLIP	1	DISC
50	SEE KIT LIMITED SLIP	1	PLATE
51	30836-1	8	BOLT - DIFFERENTIAL CASE
KIT	706999-15X	2	DRIVE GEAR AND ;PINION ASSY 2-9, 11-12,
KIT	72165X	2	DRIVE GEAR AND PINION 2,12
KIT	706625X	2	DIFFERENTIAL CASE (STANDARD) 14A, 20-22, 28
KIT	706602X	2	DIFFERENTIAL INNER PARTS (STANDARD) 14A, 22-28
KIT	706601X	2	DIFFERENTIAL INNER PARTS (LIMITED SLIP) 14A, 45-51
KIT	706354X	2	DIFFERENTIAL DISC AND PLATES (LIMITED SLIP) 48-50
KIT	706604X	2	DIFFERENTIAL ADJUSTING SHIMS 14A, 20
KIT	706605X	2	DIFFERENTIAL AND PINION SHIMS 4, 6, 11-12, 14A, 20

NOTES:

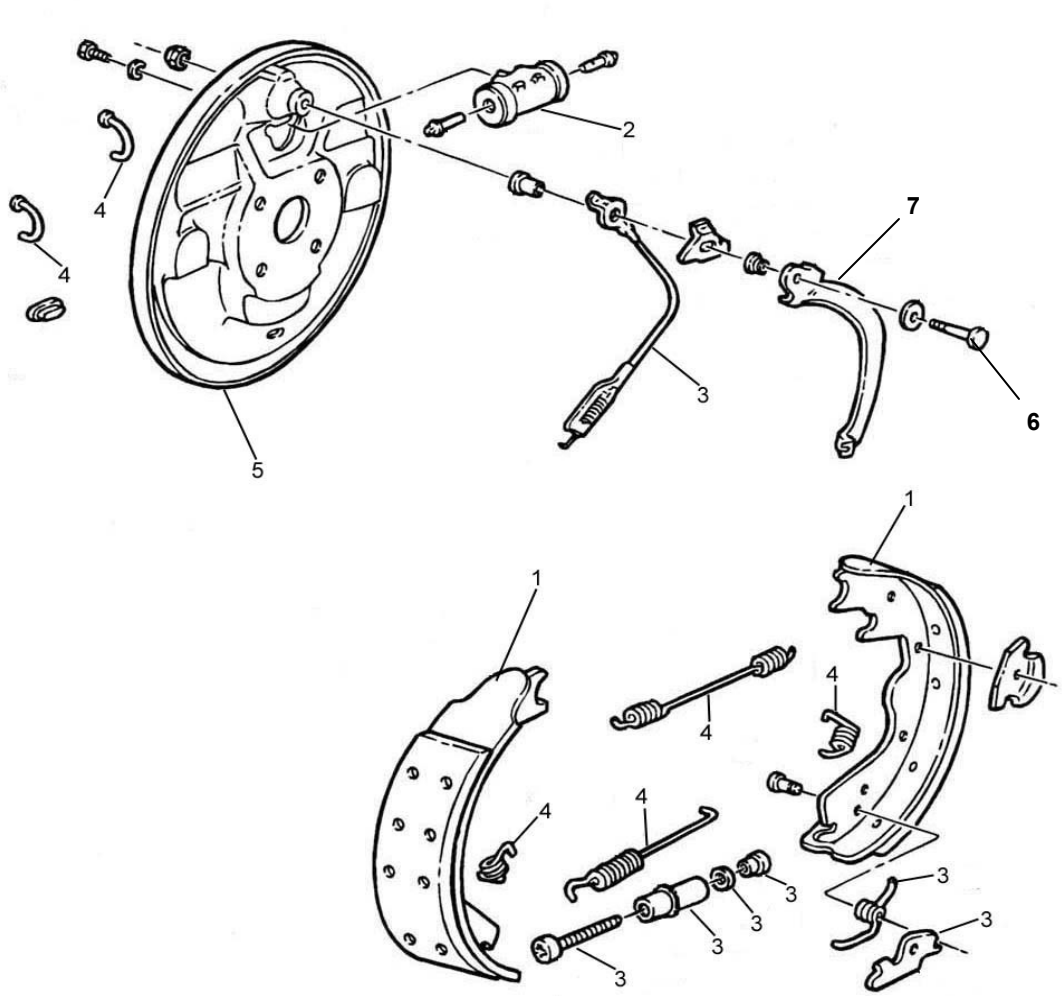
RECOMMENDED TORQUE SPECIFICATIONS DANA 70 AXLE

POSITION	THREAD	WRENCH TORQUE (LBS.-FT)
Drive Pinion Nut	7/8 - 14	240-300
Differential Bearing Cup Cap Screws	1/2 - 13	70-90
Ring Gear Cap Screws	1/2 - 20	100-120
Cover Screws	3/8 - 16	30-40
Differential Case Cap Screws	7/16 - 14	55-75
Brake Retainer Nuts	1/2 - 20	100-110
Axle Shaft Flange Nuts	7/16 - 20	64-70
Upper Kingpin	1 1/8 - 12	500-600
Kingpin Cap Cap Screws	1/2 - 20	70-90
Spindle Mounting Nuts	1/2 - 20	60-80
Tie Rod Stud Nut	5/8 - 18	70 Min (Note)
Tie Rod Clamp Nuts	1/2 - 20	35-45
Steering Arm Nuts	1/2 - 20	70-90
Steering Arm Stop Screw & Jam Nut	1/2 - 20	10-20

Note—If cotter pin cannot be installed after minimum torque is attained, the nut must be advanced until cotter pin can be installed.

BRAKES

DRUM BRAKE ASSEMBLY—REAR

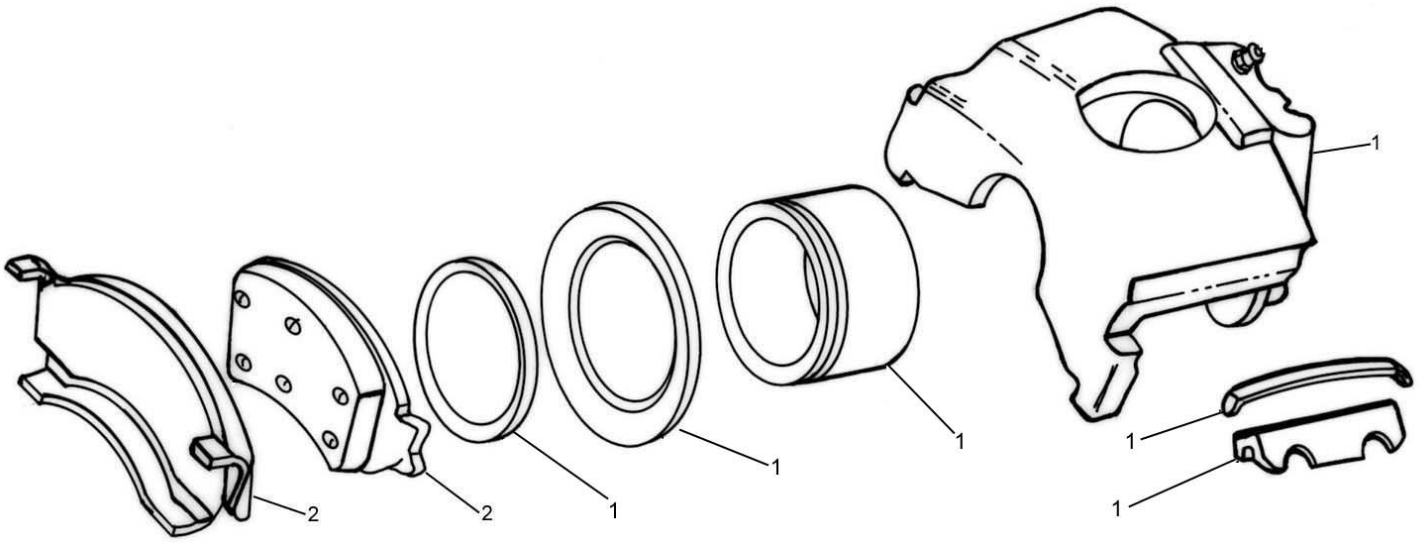


BRAKE ASSEMBLY REAR—DETAIL

Item	Part Number	Qty	Description
	070WD107-1	1	BRAKE ASSY LEFT COMPLETE
	070WD107-2	1	BRAKE ASSY RIGHT COMPLETE
1	RS358R	1	SHOES-REAR AXLE SET
2	EW-155068	1	CYL. WHEEL - LEFT
	EW-155069	1	CYL. WHEEL - RIGHT
3	H2598	1	KIT - ADJUSTER - LEFT
	H2599	1	KIT - ADJUSTER - RIGHT
4	H7199	1	KIT - SPRING REAR AXLE SET
5	4313905	1	LEFT BACKING PLATE
	4313904	1	RIGHT BACKING PLATE
6	4419698	1	BRAKE ANCHOR BOLT
7	4383264	1	PARKING BRAKE LEVER (LEFT)
7	4383265	1	PARKING BRAKE LEVER (RIGHT)

BRAKES

BRAKE CALIPER ASSEMBLY—FRONT

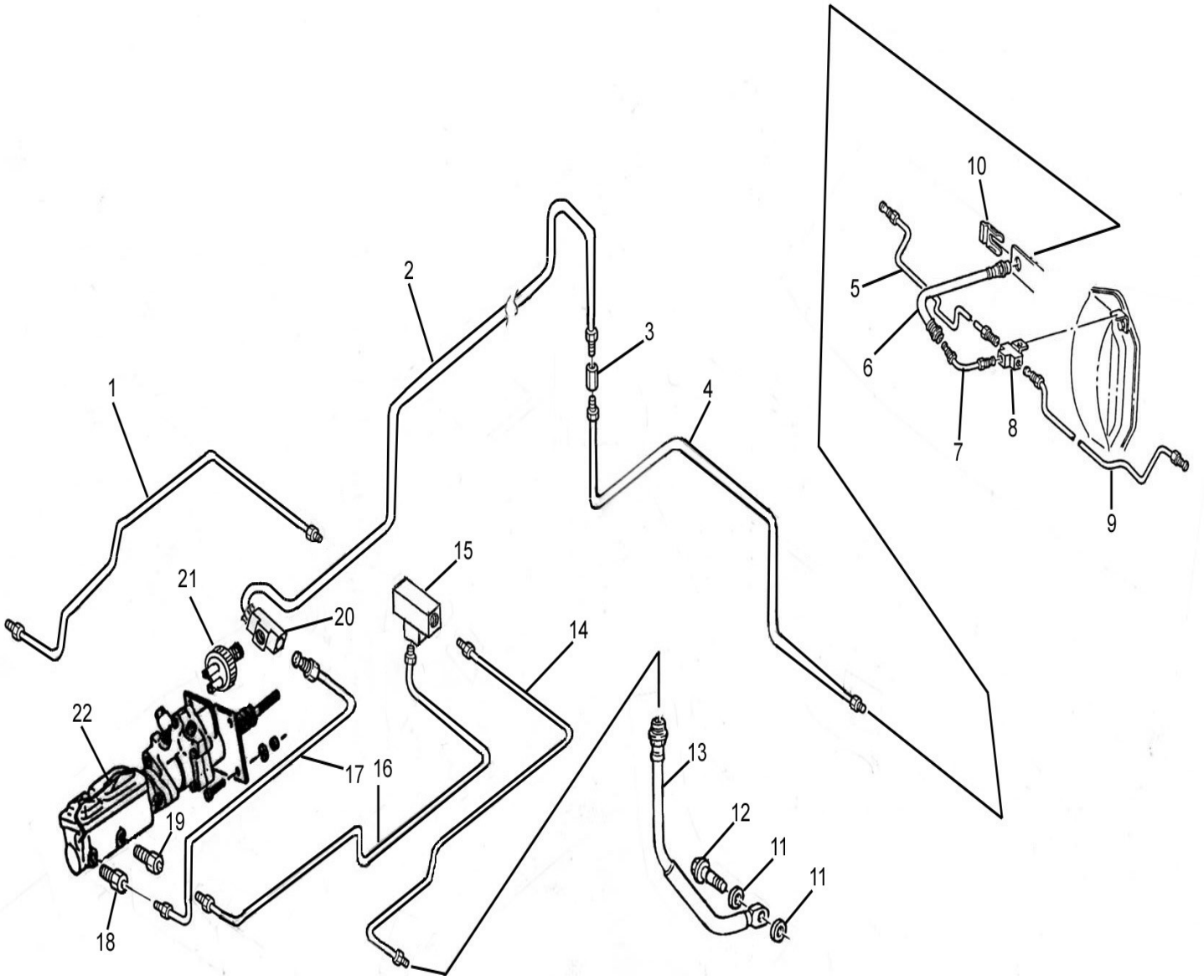


DRUM BRAKE ASSEMBLY—FRONT—DETAIL

Item	Part Number	Qty	Description
1	18-4167	1	ASSEMBLY - CALIPER L/H
	18-4166	1	ASSEMBLY - CALIPER R/H
2	RMP-149	1	KIT - DISK PADS FRONT

BRAKES

BRAKE SYSTEM—HYDRAULIC



BRAKE SYSTEM—DETAIL

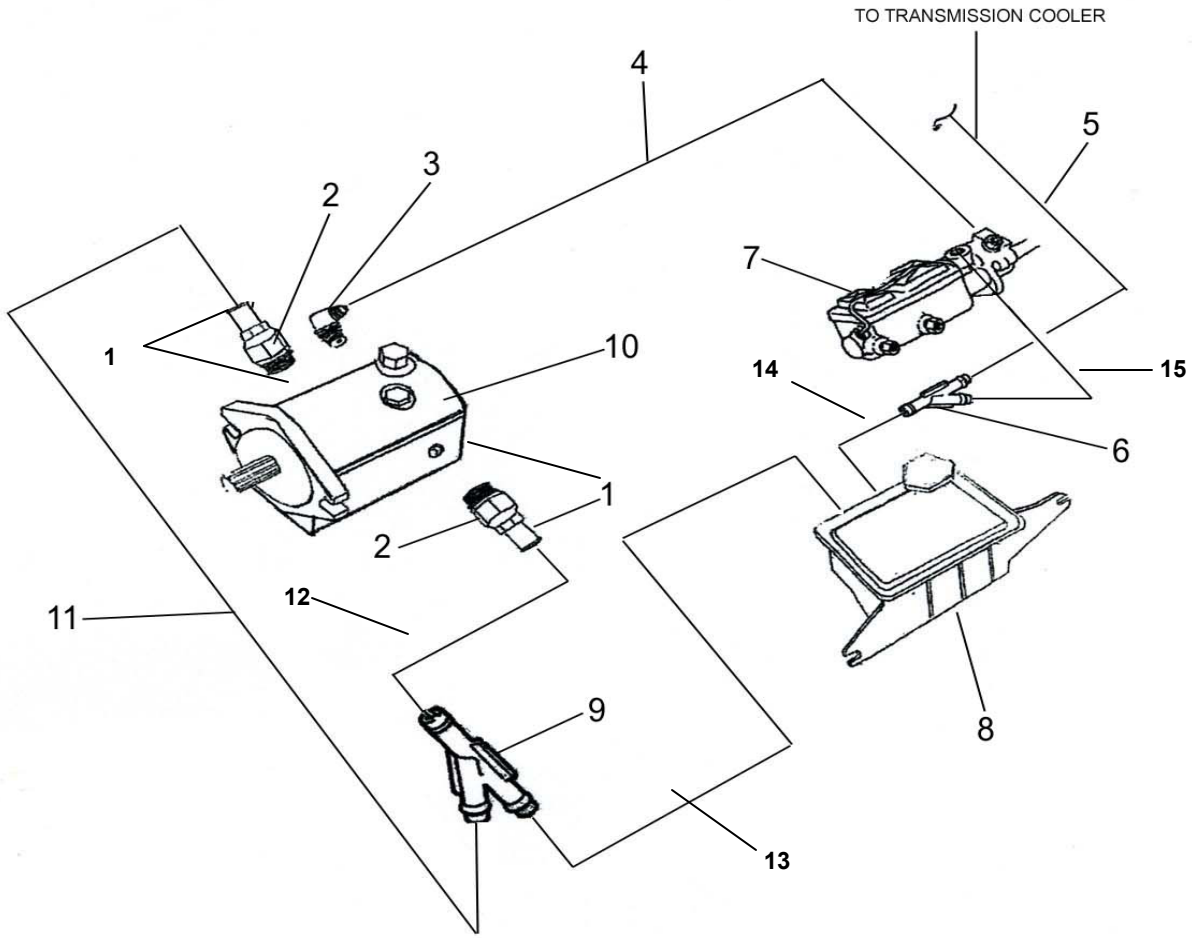
ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A-TT10-00177	1	BRAKE LINE
2	A-TT10-00164	1	BRAKE LINE
3	302X3	1	UNION
4	A-TT10-00182	1	BRAKE LINE
5	A-TT10-00169	1	BRAKE LINE
6	A-TT4-00166	1	REAR BRAKE HOSE
7	A-TT4-00167	1	BRAKE LINE
8	A-TT4-00168	1	REAR BRAKE TEE
9	A-TT10-00170	1	BRAKE LINE
10	A-TT4-00165	3	BRAKE LINE CLIP
12	A-TT4-00178	2	BANJO BOLT
13	A-TT4-00176-2	2	BRAKE LINE HOSE
14	A-TT10-00175	1	BRAKE LINE
15	A-TT4-00174	1	BRAKE LINE TEE
16	**A-TT10-00171-1	1	BRAKE LINE
16A	A-TT10-00171		BRAKE LINE (MODELS BUILT PREVIOUS TO 7-2007
17	**A-TT10-00162-1	1	BRAKE LINE
17A	A-TT10-00162		BRAKE LINE(MODELS BUILT PREVIOUS TO 7-2007)
18	A-TT5-00181	1	FITTING
19	A-TT5-00180	1	FITTING
20	A-TT4-00163	1	BRAKE LIGHT SWITCH TEE
21	A-TT4-00173	1	BRAKE LIGHT SWITCH
22	A-TT4-00161-1	1	MASTER CYLINDER

**MASTER CYLINDER A-TT4-00161-1 WAS IMPLEMENTED APPROXIMATELY 7-2007. IF YOU ARE REPLACING

A MASTER CYLINDER ON A TUG BUILT PREVIOUS TO THIS DATE YOU WILL ALSO NEED ITEMS 16 AND 17.

BRAKES

HYDRAULIC ACTUATION BRAKING SYSTEM

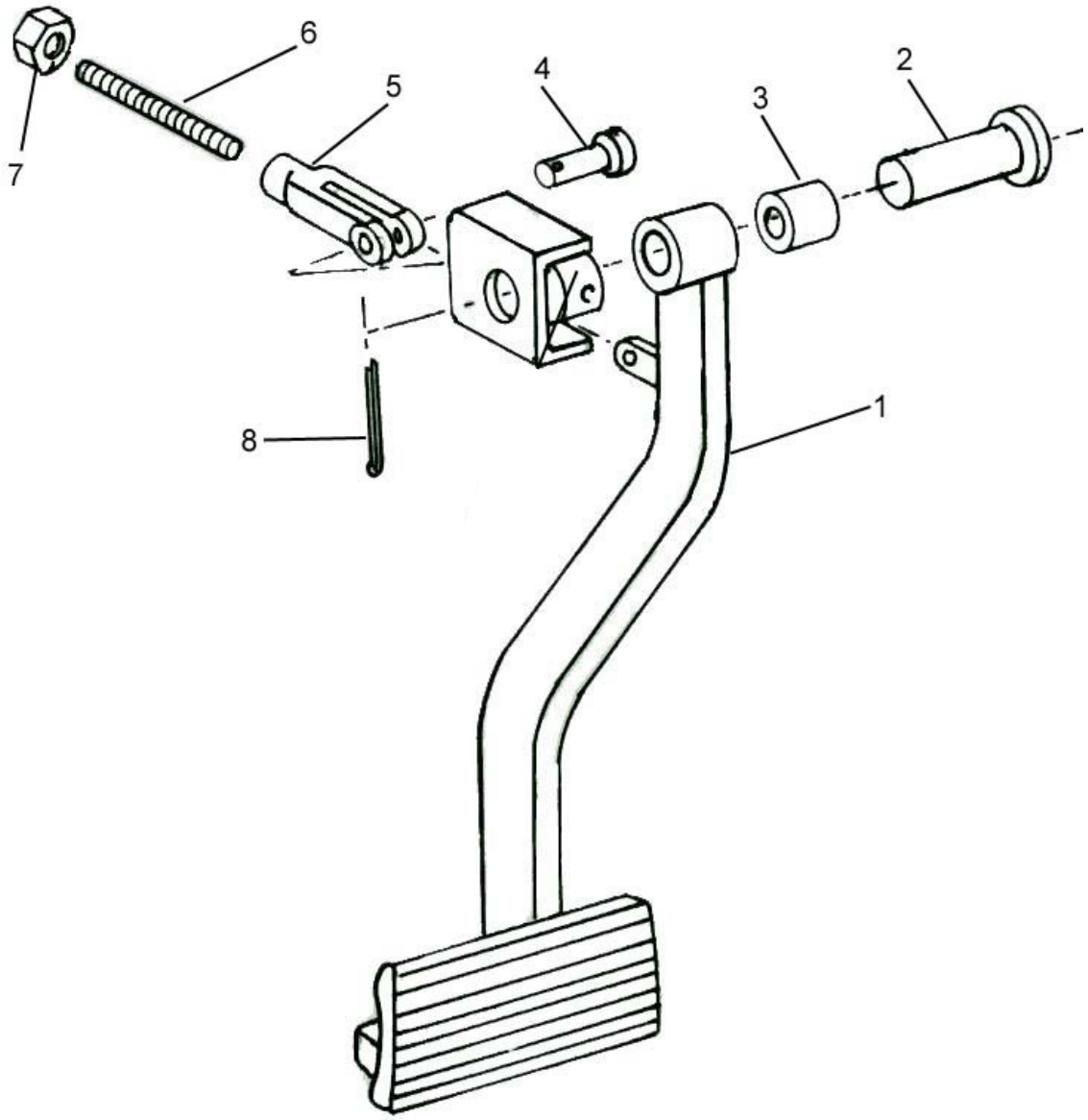


HYDRAULIC ACTUATION BRAKING SYSTEM DETAIL

Item	Part Number	Qty	Description
1	A-TT4-00606-1A	5	NIPPLE
2	C3269X12X8	2	BUSHING
3	C5515X6	1	90 DEGREE SWIVEL FITTING
4	06UB67-56-06U606	1	CUT TO FIT, BULK HOSE
5	NPN	1	CUT TO FIT, BULK HOSE - 3/8" 350 PSI
6	A-TT4-00207	1	RETURN LINE TEE
7	A-TT4-00161-1	1	MASTER CYLINDER
8	F81Z3A697AB	1	POWER STEERING RESERVOIR TANK
9	A-TT4-00606-1	1	Y FITTING
10	SP20PB11L145H3R	1	PUMP
11	12GMV MEGAVAC	1	BULK HOSE 3/4" SUCTION 51"
12	12GMV MEGAVAC	1	BULK HOSE 3/4" SUCTION 3"
13	12GMV MEGAVAC	1	BULK HOSE 3/4" SUCTION 37"
14	NPN	1	CUT TO FIT, BULK HOSE - 3/8" 350 PSI
15	NPN	1	CUT TO FIT, BULK HOSE - 3/8" 350 PSI

BRAKES

BRAKE PEDAL ASSEMBLY

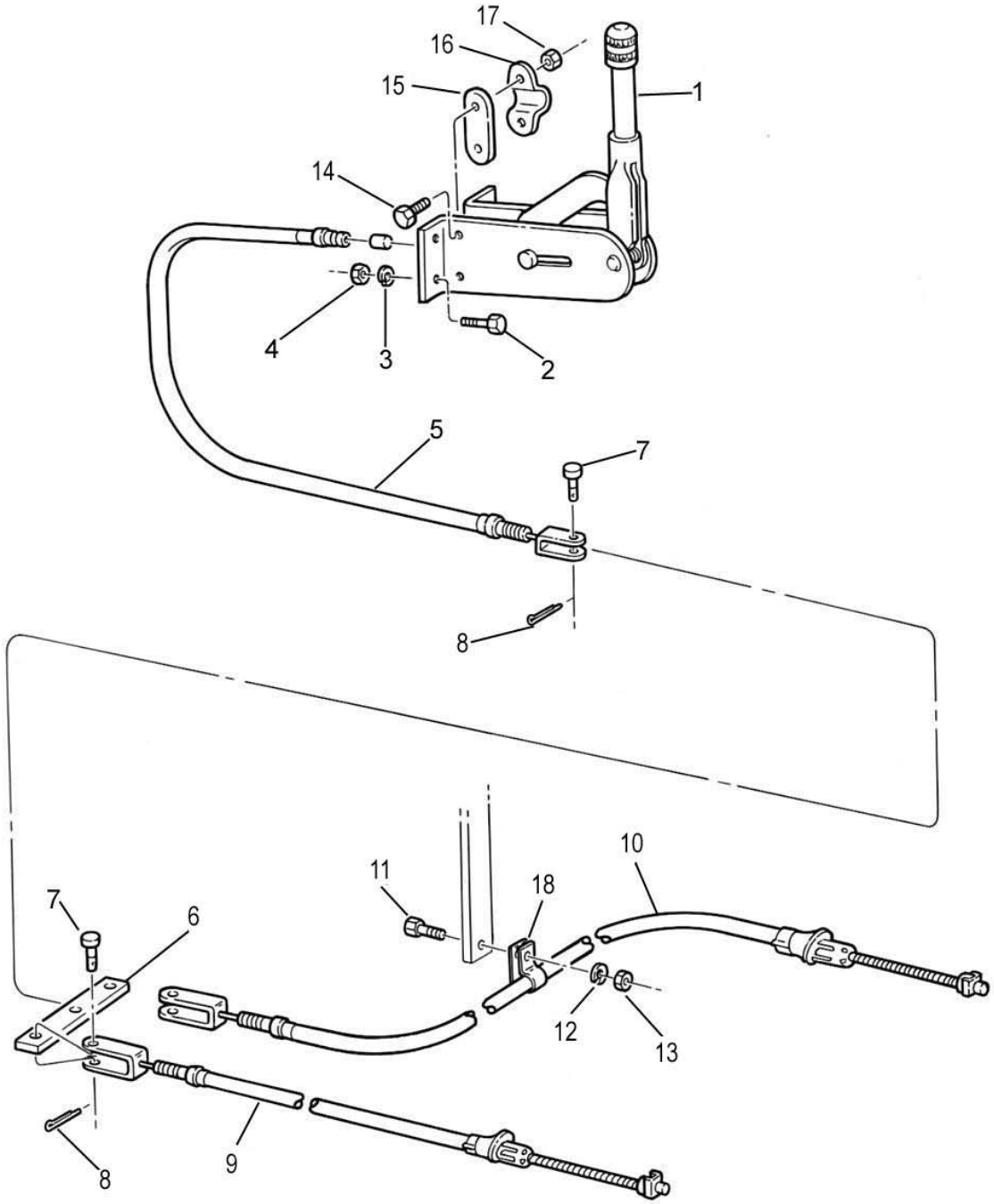


BRAKE ACTUATOR ASSEMBLY—DETAIL

Item	Part Number	Qty	Description
1	C-TT4-10181	1	BRAKE PEDAL
2	C-TT4-10182	1	BRAKE PEDAL PIVOT SHAFT
3	C-TT4-10188	1	BEARING
4	A-TT4-00193	1	CLEVIS PIN
5	A-TT4-10192	1	CLEVIS
6	NPN	1	½-20 X 12 ADJUSTING ROD
7	NPN	1	½-20 NUT
8	NPN	1	COTTER PIN

BRAKES

PARKING BRAKE ACTUATOR ASSEMBLY



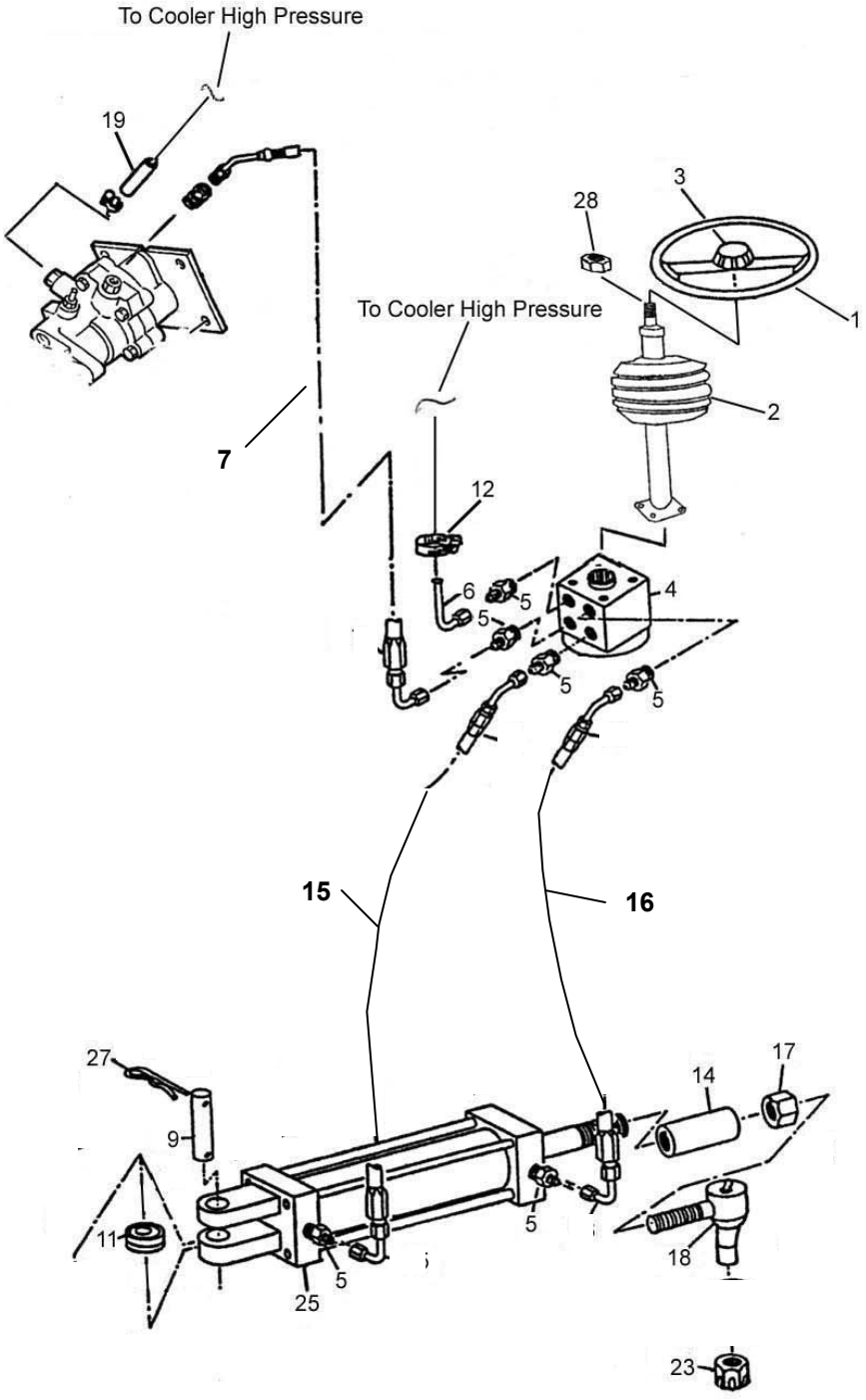
BRAKES

PARKING BRAKE ACTUATOR ASSEMBLY—DETAIL

Item	Part Number	Qty	Description
1	A-TT4-00141	1	HAND BRAKE
2	NPN	4	SCREW-HEX CAP-5/16-18 X 1
3	NPN	4	WASHER-FLAT-5/16
4	NPN	4	NUT-LOCK-5/16-18
5	B-TT4-00145	1	CABLE PRIMARY
6	A-TT4-00146	1	BAR EQUALIZER
7	NPN	3	CLEVIS PIN
8	NPN	3	COTTER PIN
9	A-TT4-00150	1	PARKING BRAKE CABLE LEFT REAR
10	A-TT4-00150	1	PARKING BRAKE CABLE RIGHT REAR
11	NPN	1	SCREW-HEX CAP-14-20 X 1
12	NPN	1	WASHER-FLAT-1/4
13	NPN	1	NUT-LOCK-1/4-20
14	NPN	1	SCREW-HEX CAP-1/4-28 X 1
15	NPN	1	CABLE CLAMP PLATE
16	NPN	1	CABLE CLAMP HANDLE
17	NPN	2	NUT-LOCK-1/4-28
18	NPN	2	CABLE CLAMP
	THE FOLLOWING ITEMS ARE NOT SHOWN		
19	AE-OPT-0069		HAND BRAKE "ON" WARNING (OPTION)
20	AE-OPT-0069 SHUTDOWN		HAND BRAKE "ON" SHUTDOWN (OPTION)
21	275.12		BUZZ LITE FOR PARKING BRAKE
22	81008429		CONTACT PIN
23	82050000		PROXIMITY SENSOR
24	82066700		MOUNTING SCREW
25	332-209-150		RELAY
26	A-TT4-00250		NEUTRAL SAFETY SWITCH

STEERING SYSTEM

STEERING SYSTEM BREAKDOWN



*

STEERING SYSTEM

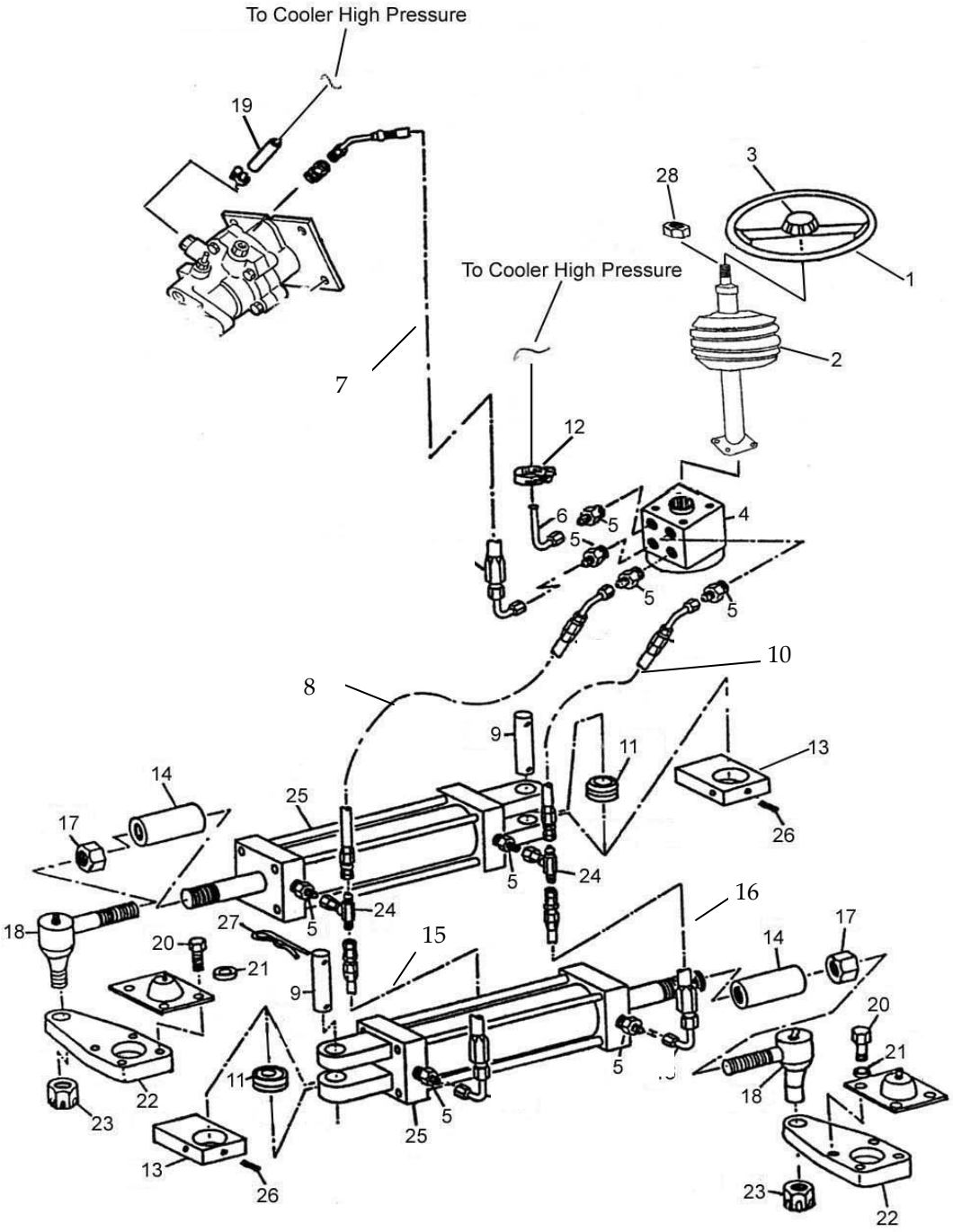
STEERING SYSTEM BREAKDOWN—DETAIL

Item	Part Number	Qty	Description
1	A-TT10-00809	1	STEERING WHEEL
2	A-TT10-00807-1	1	STEERING COLUMN
3	A-TT10-00811	1	HORN BUTTON
4	A-TU-00801	1	CHARLYNN CONTROL PUMP
5	A-TT10-00831	8	FITTING - ADAPTOR
6	A-TT10-0001	1	FITTING 90 DEGREE
7	A-TT10-00821	1	HYDRAULIC STEERING LINE 22"
9	NPN	1	HYDRAULIC CYLINDER PIVOT PIN
11	A-TT10-00826	1	BEARING (AFTER 7/99)
12	NPN	7	HOSE CLAMP
14	A-TT10-00817	1	DRAG LINK
15	A-TT10-00829	1	HYDRAULIC STEERING LINE 46"
16	A-TT10-00822	1	HYDRAULIC STEERING LINE 43"
17	A-TT10-00406	1	JAM NUT
18	A-TT10-00407	1	TIE ROD END
19	NPN	1	HIGH PRESSURE HOSE
23	NPN	1	NUT HEX SLOTTED
25	A-TT10-00803-1	1	*HYDRAULIC STEERING CYLINDER
27	NPN	2	CLIP
28	A-TT10-00813	1	WHEEL NUT 13/16 - 20
29	AE-OPT-0160 (OPTION)	1	STEERING COLUMN TURN SIGNAL SWITCH
30	AE-OPT-0160-A (OPTION)	1	12V FLASHER TURN SIGNAL

*Steering cylinder must be adjusted so when in full turn to the right and them full turn to the left the cylinder does not pull steering arm more than 3/16 of an inch. If you have any questions please call Eagle Tugs technical department.

STEERING SYSTEM

STEERING SYSTEM BREAKDOWN



STEERING SYSTEM

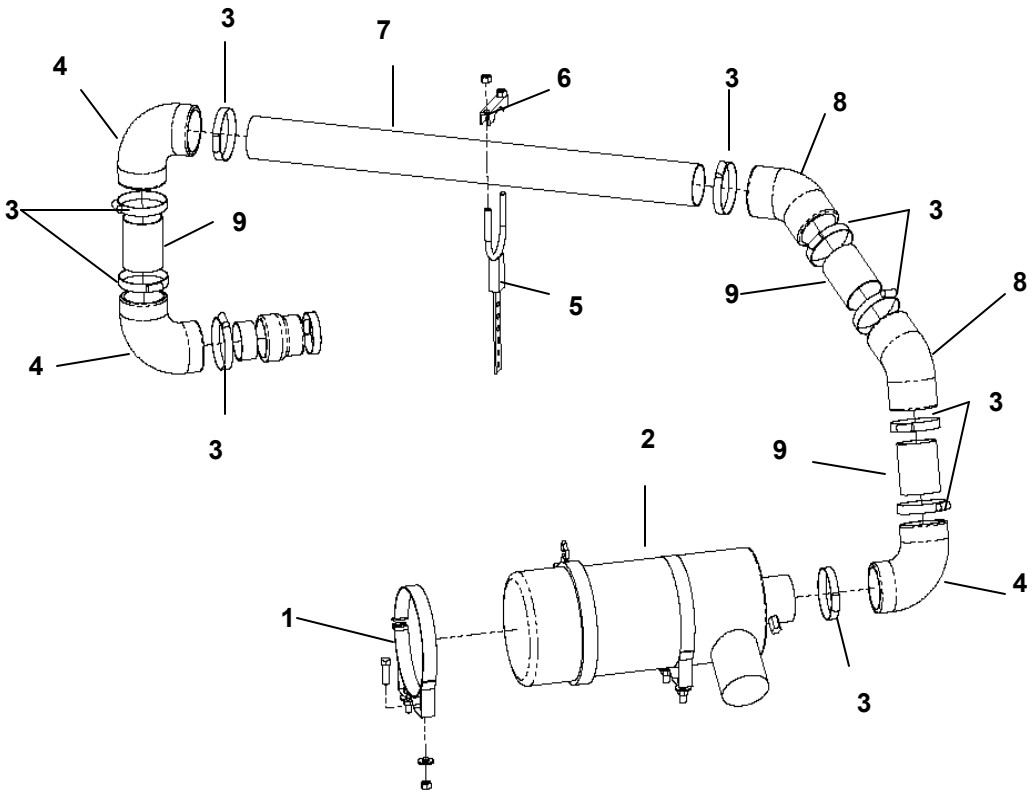
STEERING SYSTEM BREAKDOWN—DETAIL

Item	Part Number	Qty	Description
1	A-TT10-00809	1	STEERING WHEEL
2	A-TT10-00807-1	1	STEERING COLUMN
3	A-TT10-00811	1	HORN BUTTON
4	A-TT10-00801	1	CHARLYNN CONTROL PUMP
5	A-TT10-00831	8	FITTING - ADAPTOR
6	A-TT10-0001	1	FITTING 90 DEGREE
7	A-TT10-00821	1	HYDRAULIC STEERING LINE 22"
8	A-TT10-00822	1	HYDRAULIC STEERING LINE 43"
9	NPN	2	HYDRAULIC CYLINDER PIVOT PIN
10	A-TT10-00823	1	HYDRAULIC STEERING LINE 32"
11	A-TT10-00826	2	BEARING (AFTER 7/99)
12	NPN	7	HOSE CLAMP
13	A-TT10-00819	2	STEERING MOUNTING BLOCK
14	A-TT10-00817	2	DRAG LINK
15	A-TT10-00824	1	HYDRAULIC STEERING LINE 22.5"
16	A-TT10-00825	1	HYDRAULIC STEERING LINE 32'
17	A-TT10-00406	2	JAM NUT
18	A-TT10-00407	2	TIE ROD END
19	NPN	1	HIGH PRESSURE HOSE
20	NPN	8	SCREW HEX CAP 1/2 -20 X 2 1/4
21	NPN	8	WASHER FLAT 1/2
22	A-TT10-00820	2	STEERING ARM (MACHINED)
23	NPN	2	NUT HEX SLOTTED
24	C-5707X6	2	FITTING -TEE
25	A-TT10-00803	2	HYDRAULIC CYLINDER
26	NPN	2	SET SCREW 5/16 18 X 3/8
27	NPN	4	CLIP
28	A-TT10-00813	1	WHEEL NUT 13/16 - 20

*Steering cylinder must be adjusted so when in full turn to the right and them full turn to the left the cylinder does not pull steering arm more than 3/16 of an inch. If you have any questions please call Eagle Tugs technical department.

AIR CLEANER

AIR CLEANER ASSEMBLY—DIESEL

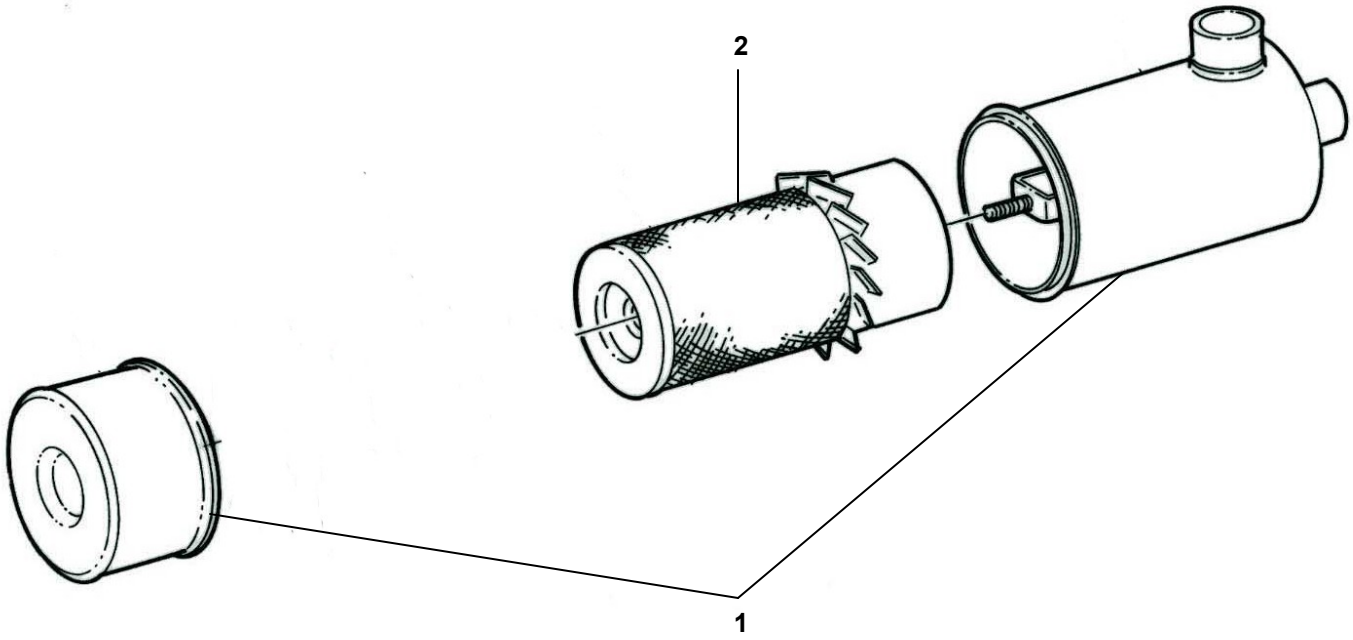


AIR CLEANER ASSEMBLY—DETAIL

Item	Part Number	Qty	Description
1	A-TT4-00092	2	AIR CLEANER BRACKET
2	A-TT4-00091-1	1	AIR CLEANER ASSEMBLY 3"
	A-TT4-00091	1	AIR CLEANER ASSEMBLY 2"
3	NPN	7	HOSE CLAMPS
4	A-TT4-00097-1	3	90 DEGREE ELBOW
5	A-TT4-00260	1	PIPE HANGAR
6	A-TT4-00254	1	2" EXHAUST CLAMP
7	NPN	1	BULK-INTAKE TUBE
8	A-TT4-00094-3	2	45 DEGREE ELBOW
9	NPN	3	BULK-INTAKE TUBE - 3"

AIR CLEANER

AIR CLEANER SUB-ASSEMBLY

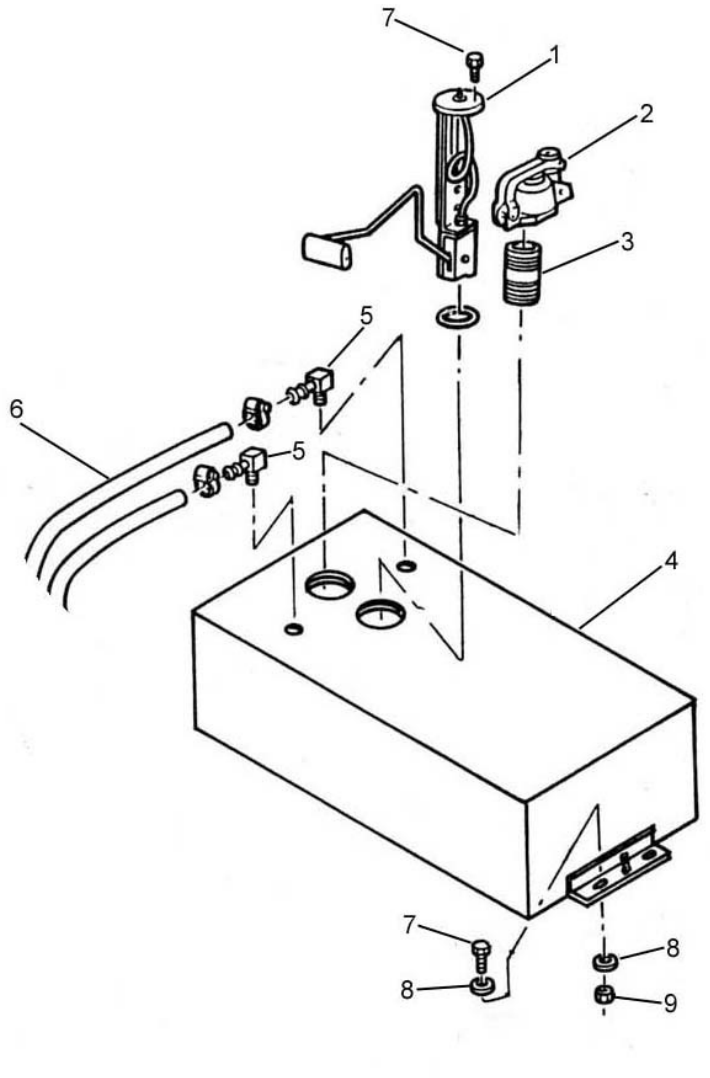


AIR CLEANER SUB-ASSEMBLY—DETAIL

Item	Part Number	Qty	Description
1	A-TT4-00091	1	AIR CLEANER 2"
	A-TT4-00091-1	1	AIR CLEANER 3"
2	P14-8966	1	AIR CLEANER ELEMENT 2"
	P549271	1	AIR CLEANER ELEMENT 3"

FUEL SYSTEM

FUEL SYSTEM—DIESEL

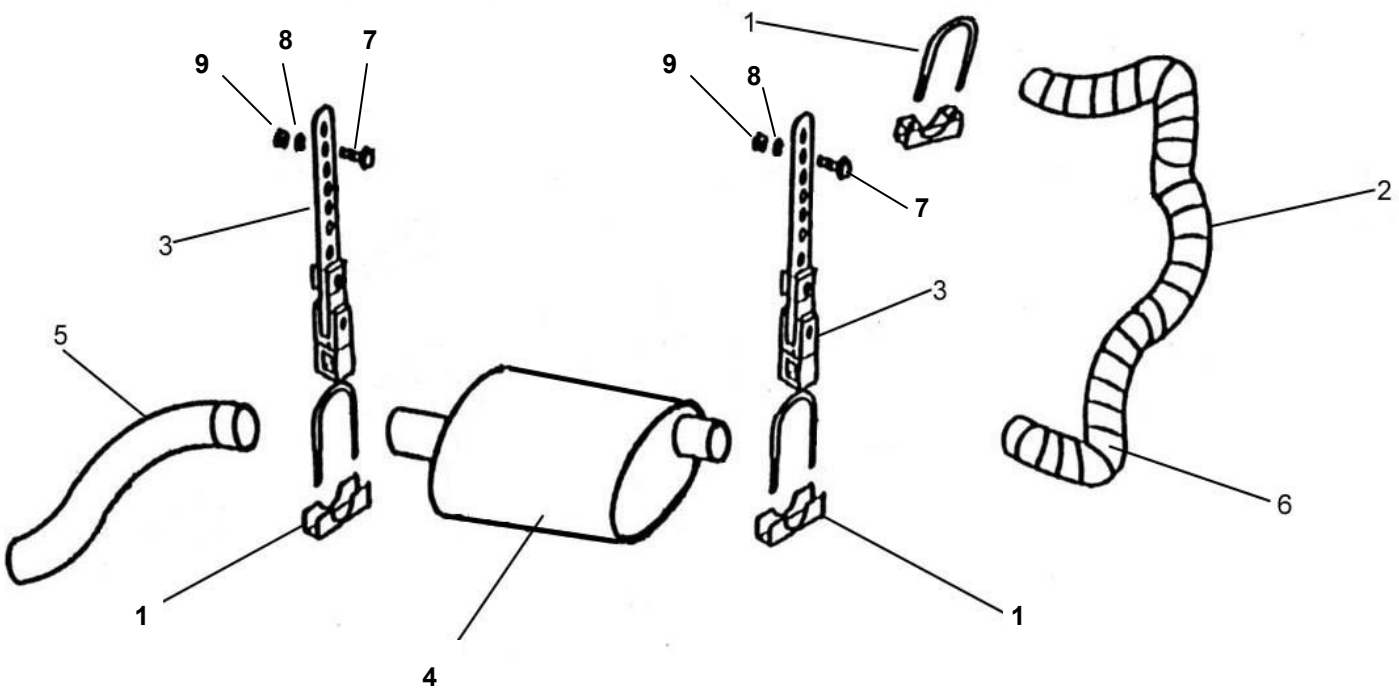


FUEL SYSTEM—DETAIL

Item	Part Number	Qty	Description
1	A-TT4-00276	1	FUEL SENDING UNIT
2	A-TT4-00271-1	1	FUEL CAP
3	A-TT4-00272	1	NIPPLE
4	A-TT10-00273	1	FUEL TANK
5	A-TT4-00274	6	90 DEGREE ELBOW FITTING
6	NPN	1	BULK-5/16 FUEL LINE
7	NPN	4	BOLT
8	NPN	6	WASHER
9	NPN	4	LOCK NUT
10	NPN	5	SCREW-HEX CAP-10-32 X3/4

EXHAUST

EXHAUST SYSTEM– DIESEL

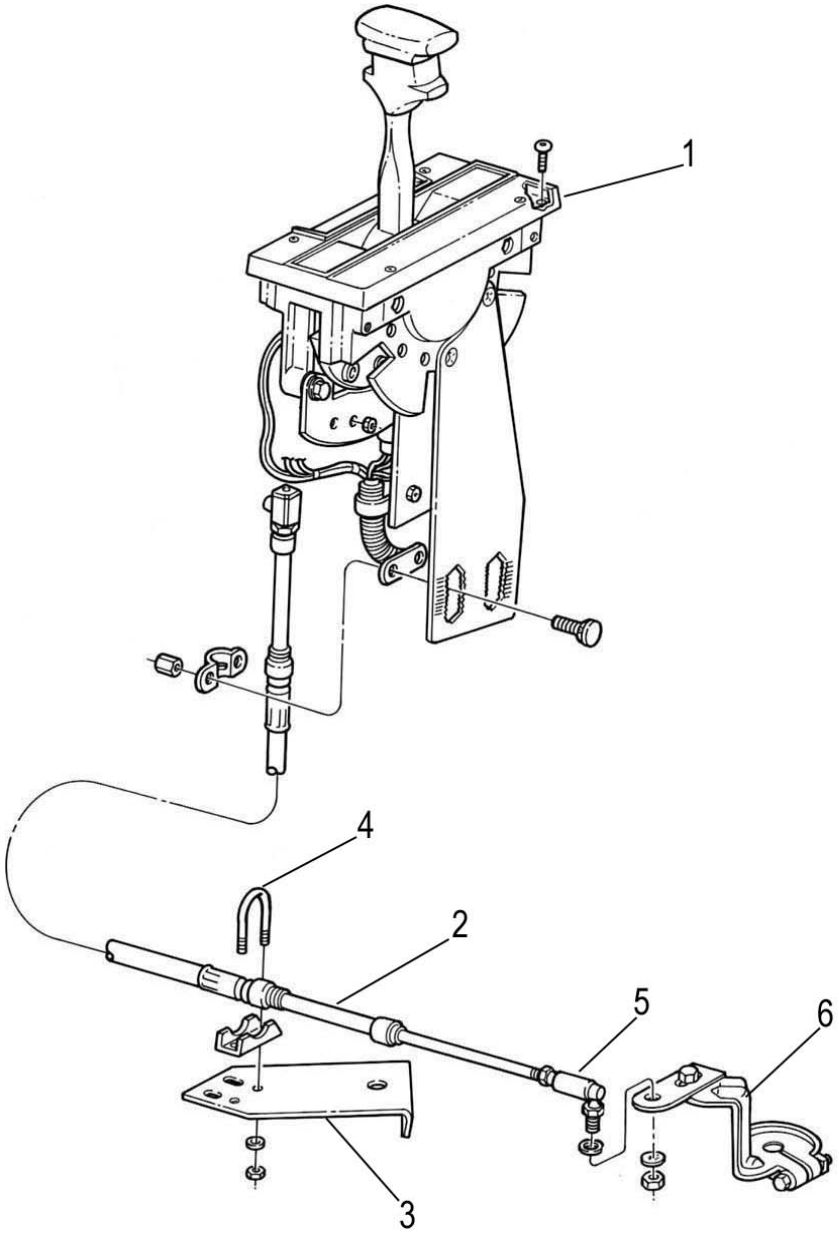


EXHAUST SYSTEM—DETAIL

Item	Part Number	Qty	Description
1	A-TT4-00254	3	2" MUFFLER CLAMPS
2	A-TT10TD-00253-1	1	DIESEL EXHAUST PIPE
3	A-TT4-00260	2	PIPE HANGER
4	A-TT4-00258-1	1	MUFFLER
5	A-TT4-00259-1 & 41187	1	90 DEGREEE TAIL PIPE
6	A-TT12-00255	1	EXHAUST WRAP
7	NPN	2	3/8-16 X 1 HEX CAP SCREW
8	NPN	2	3/8 FLAT WASHER
9	NPN	2	3/8 LOCK NUT
10	AE-OPT-0059	1	SPARK ARRESTING MUFFLER (OPTION)
11	AE-OPT-0029	1	DIESEL SCRUBBER (OPTION)

OPERATOR COMPARTMENT

TRANSMISSION CONTROL

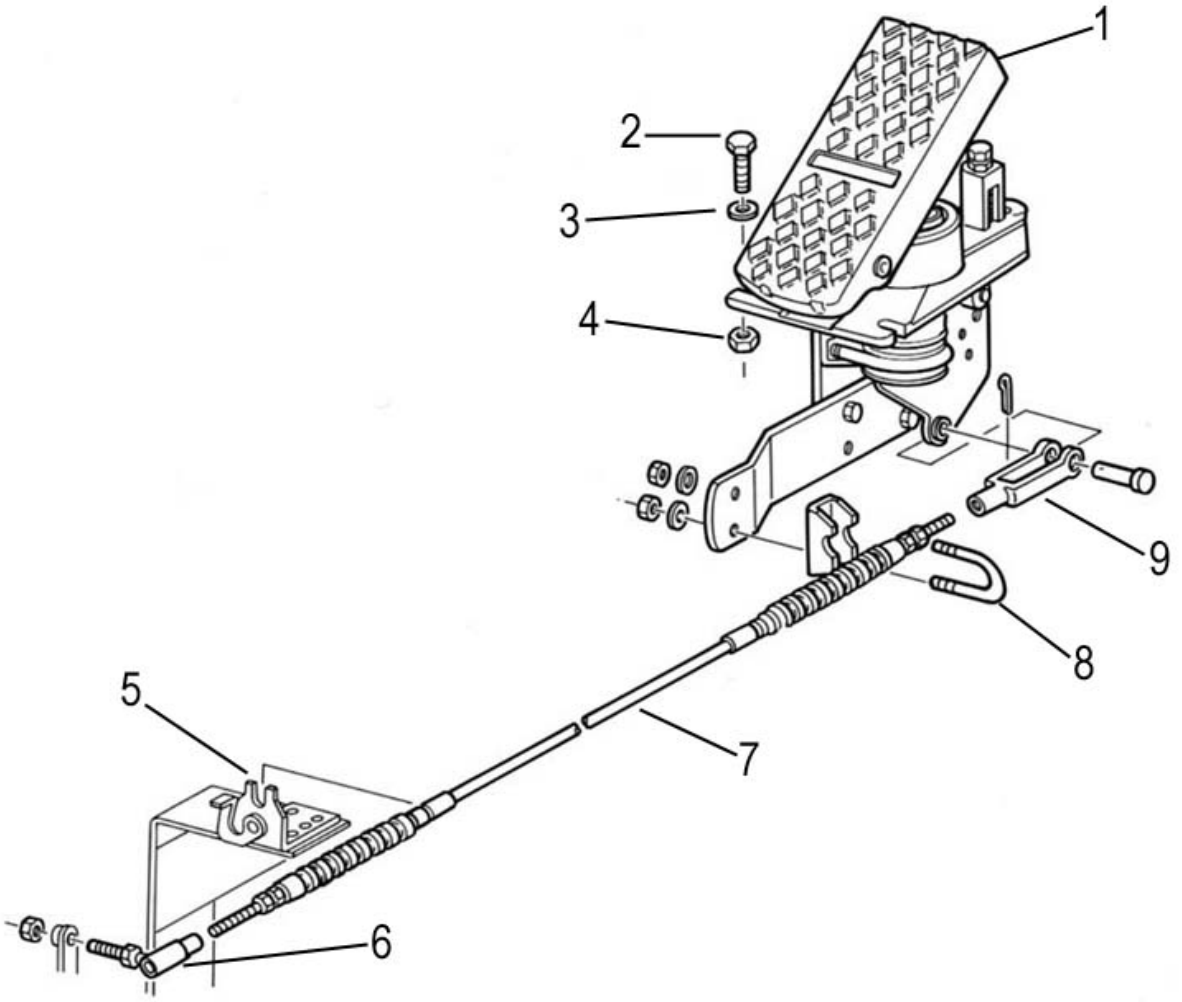


TRANSMISSION CONTROL—DETAIL

Item	Part Number	Qty	Description
1	A-TT4-00245	1	TRANSMISSION SHIFT CONTROL
2	A-TT4-00246	1	TRANSMISSION SHIFT CABLE
3	A-TT4-00248	1	TRANSMISSION CABLE BRACKET ASSEMBLY
4	A-TT4-00247	1	U-BOLT KIT
5	A-TT4-00249	1	BALL JOINT KIT
6	A-TT4-00419	1	TRANSMISSION LEVER
7	302008	1	INDICATOR STRIP REPAIR KIT
8	302348	1	HANDLE REPAIR KIT

OPERATOR COMPARTMENT

ACCELERATOR PEDAL ASSEMBLY

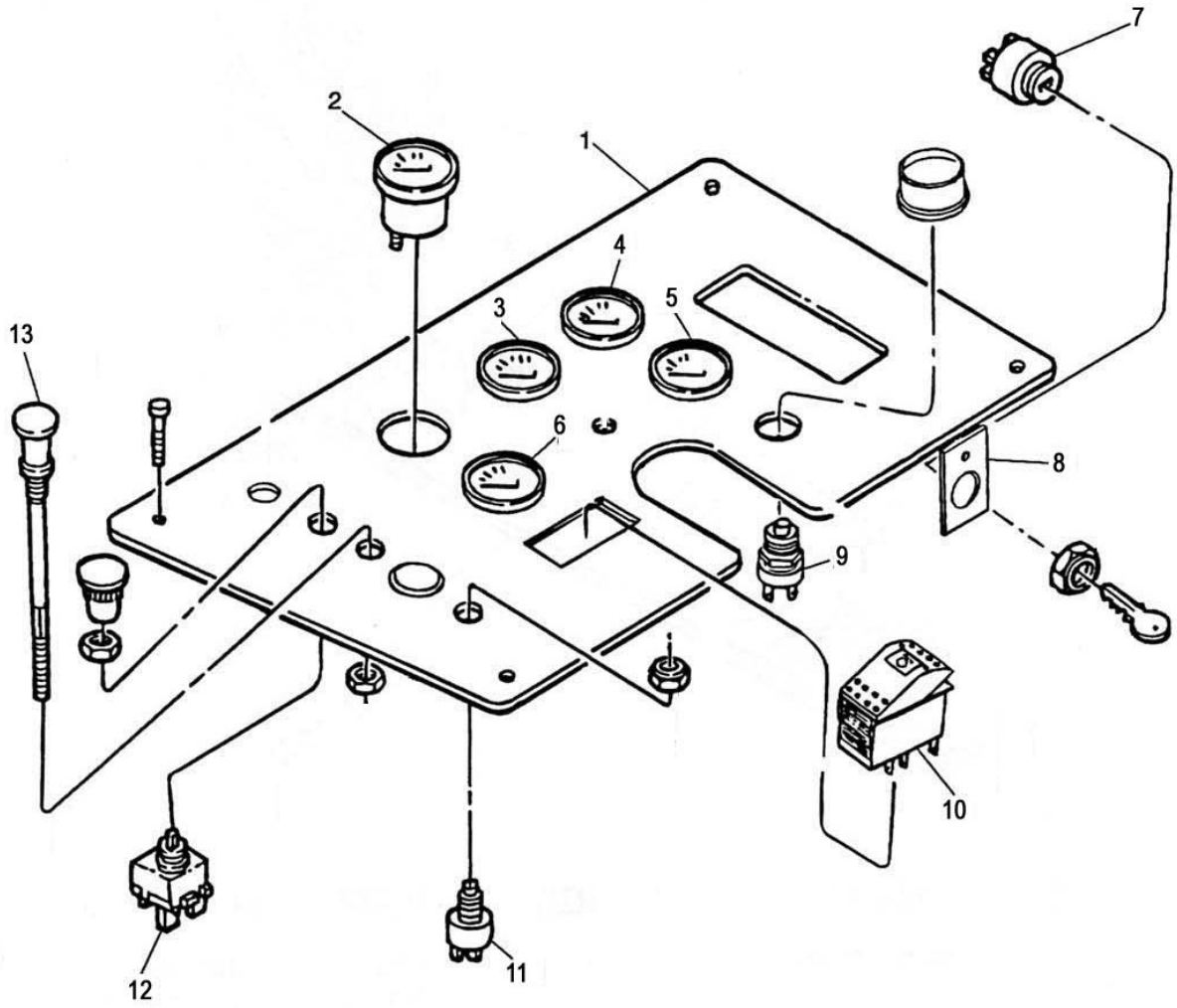


ACCELERATOR PEDAL ASSEMBLY—DETAIL

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	A-TT4-00281-1	1	FOOT PEDAL ASSEMBLY
2	NPN	3	SCREW-HEX CAP-1/4-20 X 1.00 G8
3	NPN	3	WASHER-FLAT-1/4
4	NPN	3	NUT-LOCK-1/4-20
5	A-TT4-00285*	1*	CABLE CLASP*
6	A-TT4-00287	1	BALL JOINT KIT - NUT INCLUDED
7	A-TT10-00282-1	1	ACCELERATOR CABLE ASSEMBLY
8	A-TT4-00288	1	ACCELERATOR U-BOLT KIT
9	A-TT4-00283-1	1	ACCELERATOR CLEVIS-PIN KIT
*CLASP MUST BE WELDED TO BRACKET			

OPERATOR COMPARTMENT

INSTRUMENT PANEL



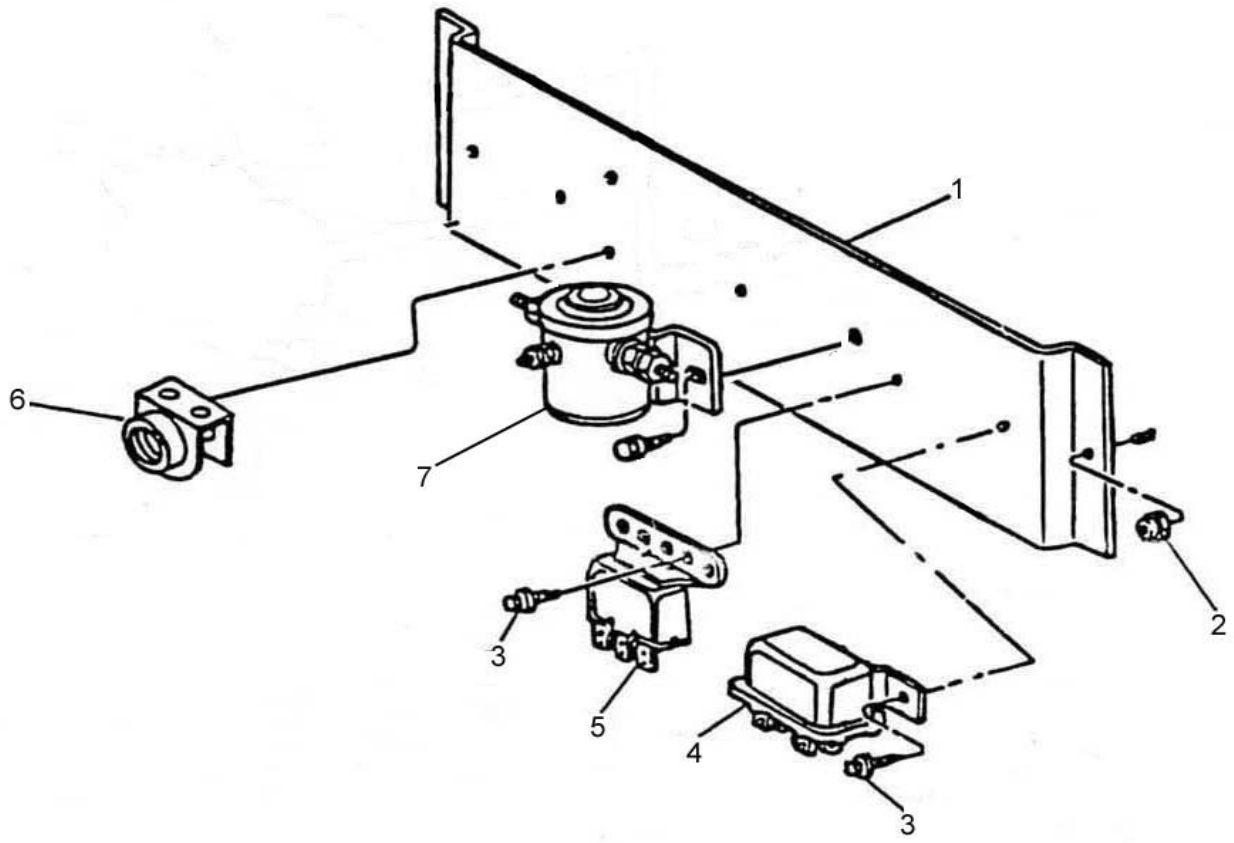
OPERATOR COMPARTMENT

INSTRUMENT PANEL—DETAIL

Item	Part Number	Qty	Description
1	C-TT4-00411	1	DASH PANEL (NO INSTRUMENTS)
2	A-TT4-00412	1	OIL PRESSURE GAUGE
3	A-TT4-00415	1	FUEL GAUGE
4	A-TT4-00416	1	VOLT-AMP GAUGE
5	A-TT4-00417	1	TEMP GAUGE
6	A-TT4-00418	1	HOUR METER
7	A-TT4-00422-2	1	IGNITION SWITCH (KEYED OPTION)
7	A-TT4-00422-3	1	IGNITION SWITCH (KEYLESS OPTION)
8	A-TT6-0015-1	1	PLATE, MOUNTING IGNITION SWITCH
9	TMD27M00200	1	GLOW PLUG SWITCH
10	A-TT4-00423-1	1	HEAD LIGHT SWITCH
11	A-TT4-00428	1	HORN BUTTON
12	A-TT4-00609	1	HEATER FAN SWITCH
13	A-TT4-00608	1	TEMPERATURE CONTROL CABLE
NS	A-TT4-00434-1	1	WIRE HARNESS (DASH ONLY)
NS	A-TT4-00435-1	1	80 AMP CIRCUIT BREAKER
NS	AE-OPT-0084	1	AMMETER(OPTION)
NS	AE-OPT-00152	1	TRANSMISSION FLUID TEMP
	The following optional items are NOT SHOWN		
14	AE-OPT-0080	1	HI TEMP-LO OIL SHUTDOWN (OPTION)
15	9B3215	1	SHUTDOWN MODULE
16	275-1	1	LOW OIL BUZZ LITE
17	275-2	1	HI TEMP BUZZ LITE
18	8611931F	2	LENS COVER BUZZ LITES

LIGHTS & ELECTRICAL

ELECTRICAL BOARD

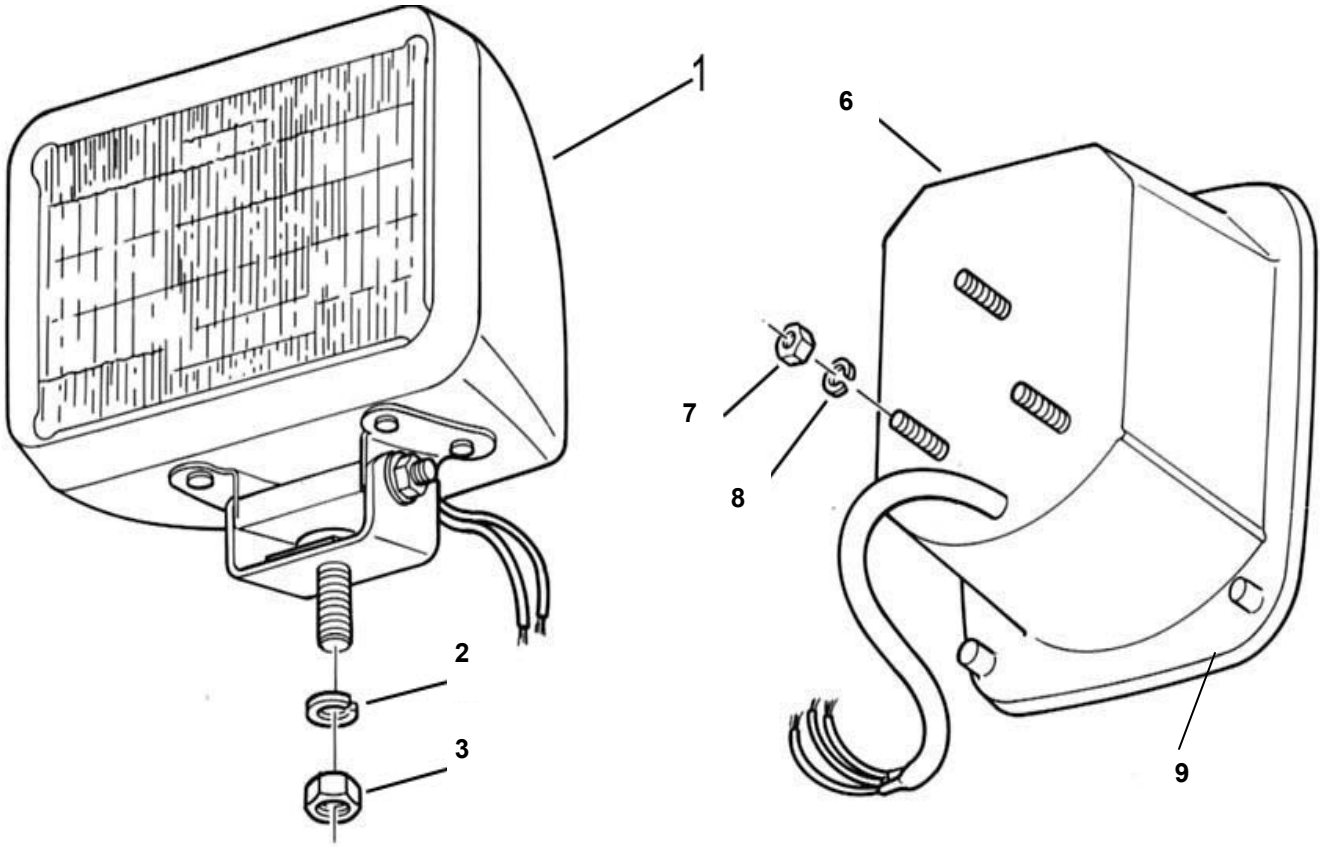


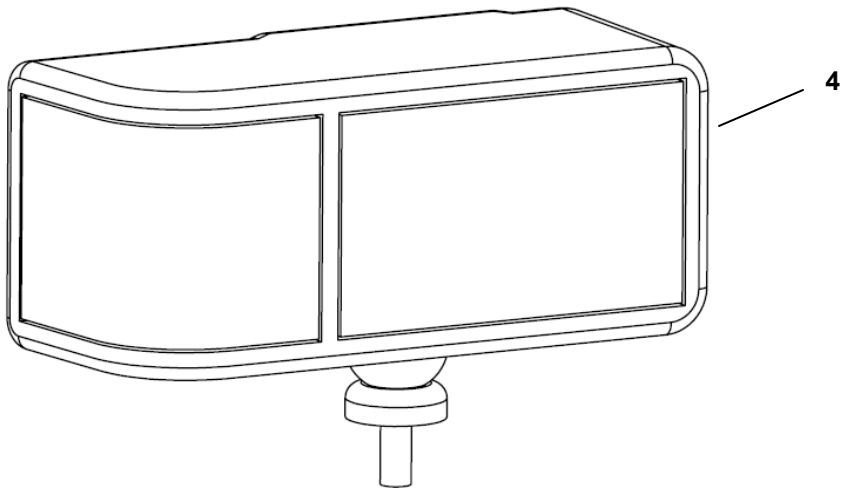
ELECTRICAL BOARD—DETAIL

Item	Part Number	Qty	Description
1	B-TT4-00301	1	MOUNTING BRACKET
2	NPN	2	LOCK NUT 10-32
3	NPN	5	SELF DRILLING SCREWS
4	A-TT4-00302	1	STARTER RELAY
5	A-TT4-00303-1	1	HORN RELAY
6	A-TT4-00301	1	GLOW PLUG RESISTER
7	A-TT4-00308	2	RELAY

LIGHTS & ELECTRICAL

HEADLIGHT & TAILLIGHT ASSEMBLY





LIGHTS & ELECTRICAL

HEADLIGHT & REAR SPOT LIGHT ASSEMBLY—DETAIL

Item	Part Number	Qty	Description
1	A-TT10-00291	2	HEADLIGHT
2	NPN	2	NUT-1/2-13
3	NPN	6	NUT-1/4-20
4A	AE-OPT-0075-1 (TEAR DROP STYLE)	2	HEADLIGHT WITH TURN SIGNAL (OPTION)
4B	A-TT4-00291-6 (RETANGULAR STYLE)	2	HEADLIGHT WITH TURN SIGNAL (OPTION)
5	A-TT4-00291-5 (NOT SHOWN)	1	REAR FACING SPOT LIGHT

TAILLIGHT ASSEMBLY—DETAIL

Item	Part Number	Qty	Description
6	A-TT4-00292	2	TAILLIGHT
7	NPN	2	WASHER-FLAT-1/2
8	NPN	6	WASHER-FLAT-1/4
9	73-1912		TAIL LENS COVER

REPLACEMENT BULBS

Item	Part Number	Qty	Description
10	H4		REPL BULB ITEMS 1 AND 4A
11	H3		REPL BULB ITEM 5
12	1157		REPL BULB BRAKE LIGHT ITEM 6 & TURN SIGNAL ITEM 4B
13	1156		REPL BULB REVERSE LIGHT ITEM 6
14	3157 NA		REPL BULB TURN SIGNAL ITEM 4
15	H6545		SEALED BEAM FOR ITEM 4B

OPTIONS NOT SHOWN

Item	Part Number	Qty	Description
15	AE-OPT-0076	2	ROOF MOUNTED TURN SIGNAL LAMP

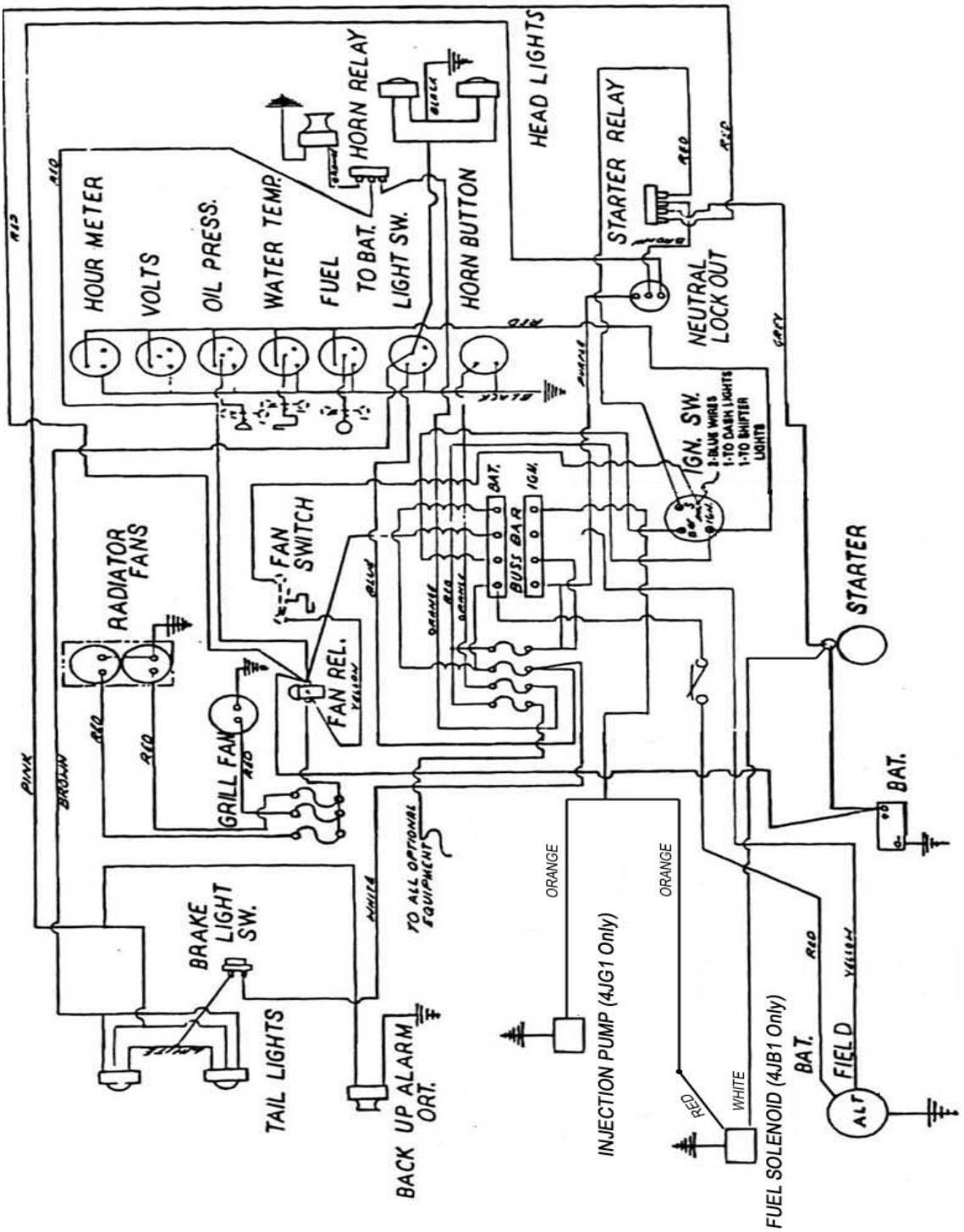
**DUE TO ENGINEERING IMPROVEMENTS YOU MAY HAVE HEADLIGHTS OTHER THAT THE ONES LISTED*

**IF YOUR TUG HAS GAS TANK REV C A-TT10-00273 (OLDER MODELS) YOU CAN USE ITEMS 1, 4A OR 5.

**IF YOUR TUG HAS GAS TANK REV D A-TT10-00273 (NEW TANK WITH NOTCHED CORNER) YOU CAN USE ITEMS 1, 4A, 4B OR 5.

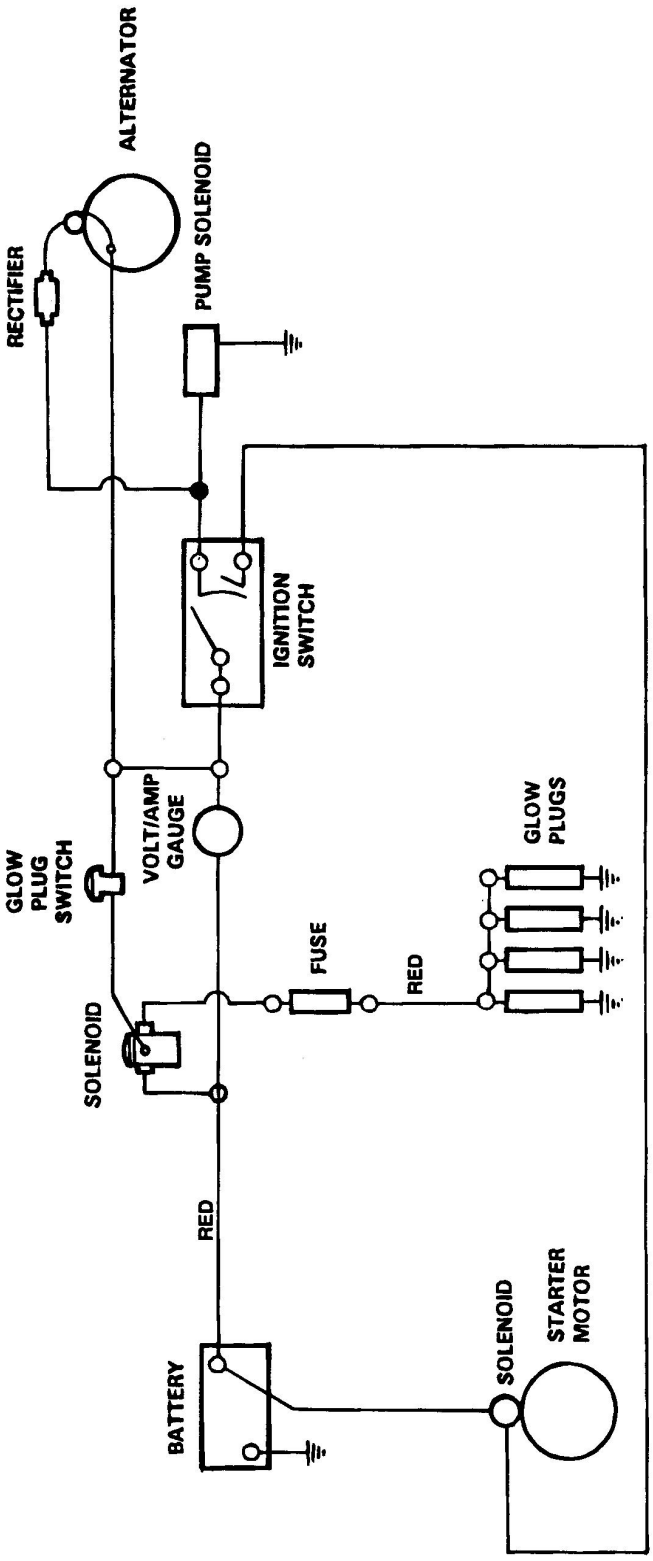
LIGHTS & ELECTRICAL

WIRING HARNESS



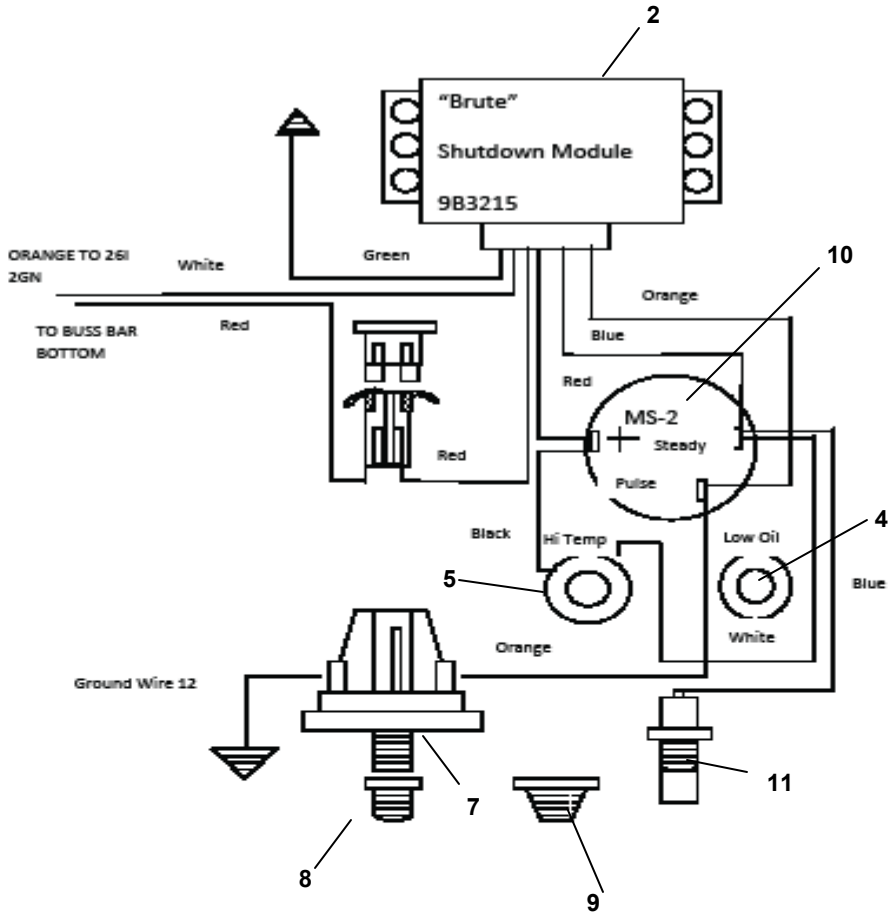
LIGHTS & ELECTRICAL

WIRING SCHEMATIC



LIGHTS & ELECTRICAL

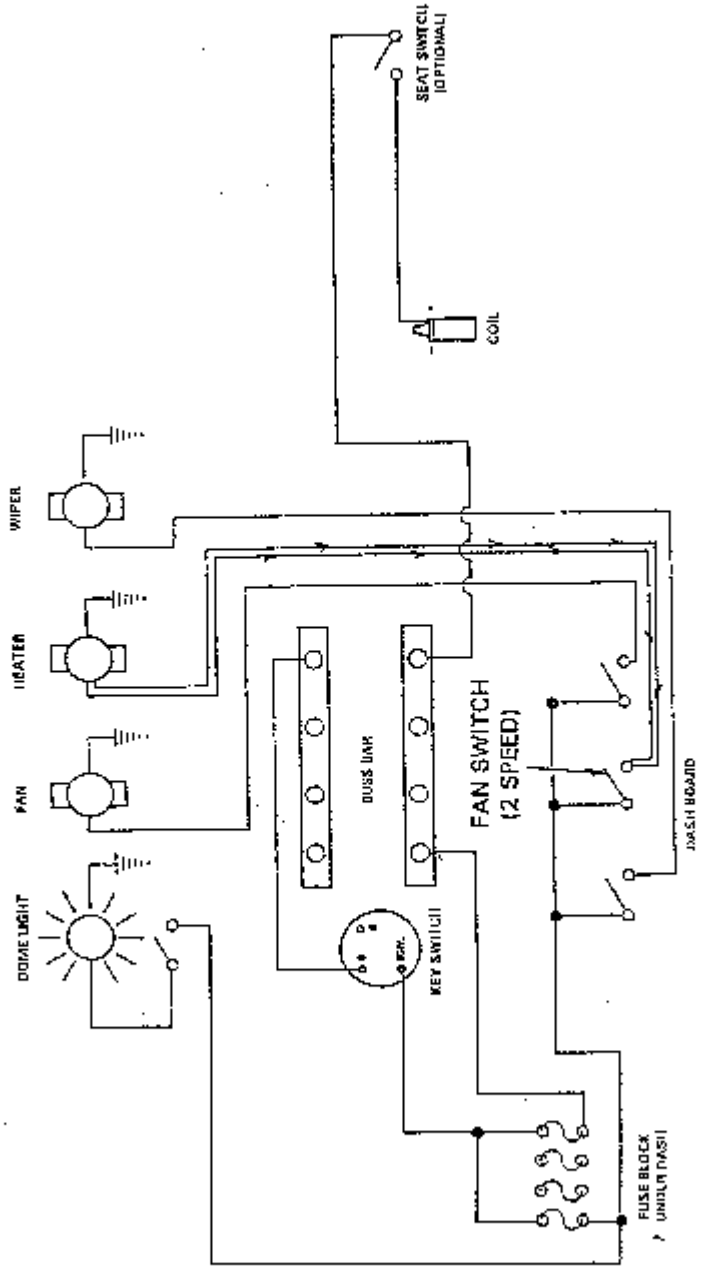
SHUTDOWN OPTION WIRING



Item	Part Number	Qty	Description
1a	AE-OPT-0080(COMPLETE ASSY)	1	LOW OIL/HI TEMP SHUTDOWN DIESEL ENG
1b	AE-OPT-0081-1(COMPLETE ASSY)	1	LOW OIL/HI TEMP SHUTDOWN GASOLINE
2	9B3215	1	SHUTDOWN MODULE
3	W2007.01	1	WIRE HARNESS
4	861193F	1	OIL PRESSURE LIGHT
5	8609331F	1	TEMPERATURE LIGHT
6	1215	2	LENS COVER SHROUD(NOT SHOWN)
7	H1004	1	PRESSURE SWITCH
8	3750202	1	1/8 MALE/FEMALE ADAPTER(NOT SHOWN)
9	3730402	1	1/4 X 1/8 ADAPTER

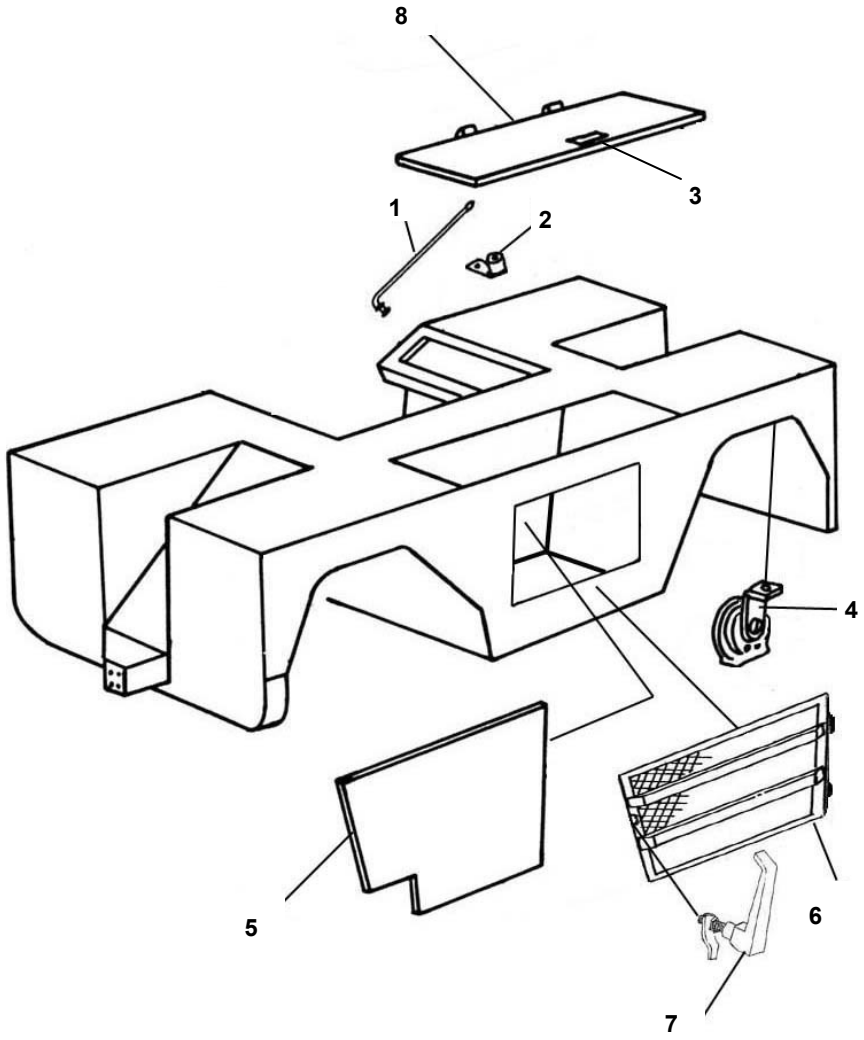
LIGHTS & ELECTRICAL

CAB OPTION WIRING



OTHER ASSEMBLY

BODY ASSEMBLY

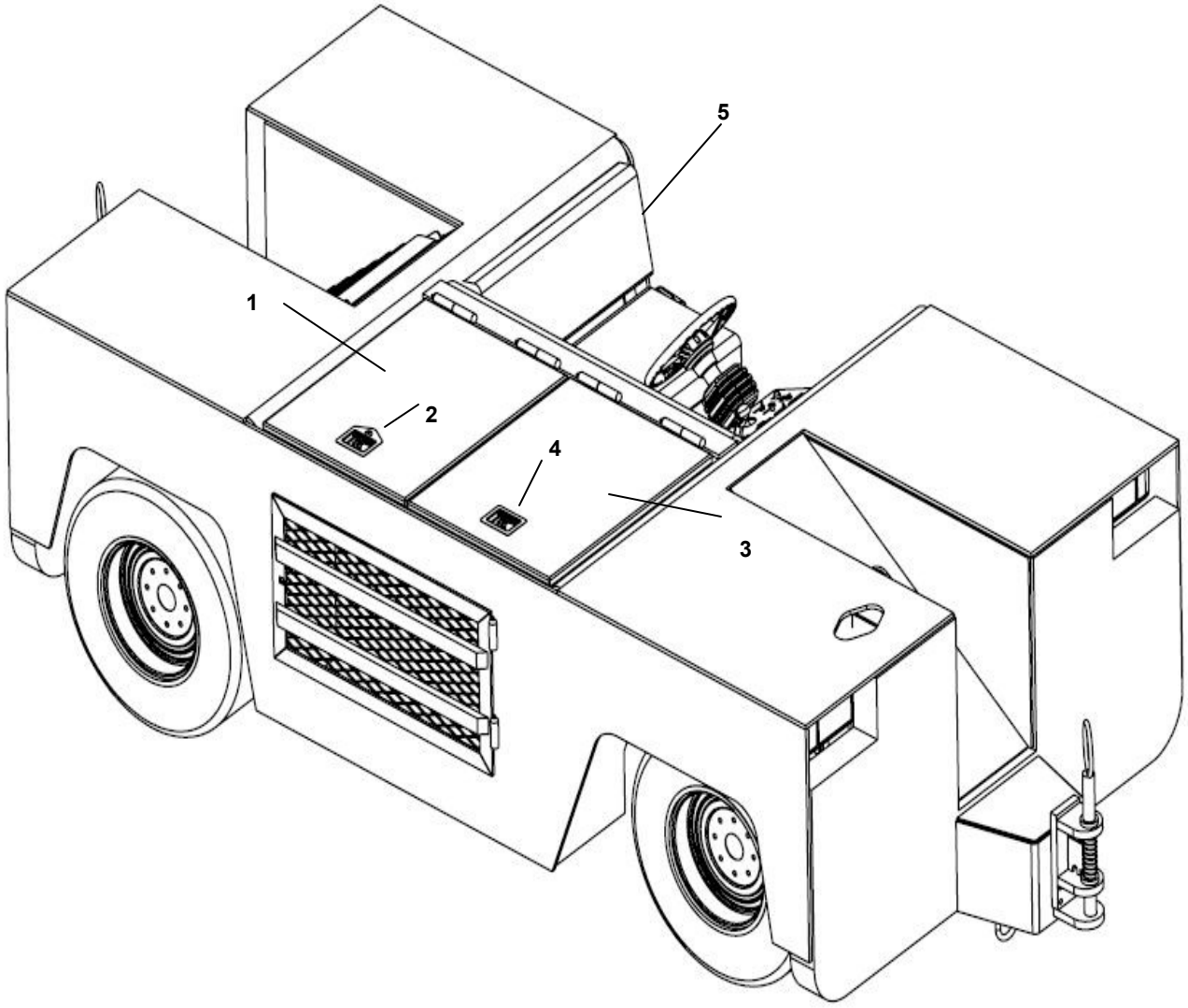


BODY ASSEMBLY –DETAIL

Item	Part Number	Qty	Description
1	NPN	1	HOOD PROP
2	NPN	1	HOOD PROP ASSEMBLY
3	C-TT4-0012-2	1	T-HANDLE LATCH
3	C-TT4-0012-3	1	LOCKING T-HANDLE LATCH
4	A-TT4-0052	1	HORN ASSEMBLY
5	A-TT4-0049	1	HEAT SHIELD
6	D-TT4-0009-1	1	GRILL GUARD/ACCESS DOOR
7	62-10-603-20	1	LATCH FOR ACCESS DOOR
8	B-TT10-00012	1	HOOD

OTHER ASSEMBLY

BODY ASSEMBLY WITH SPLIT HOOD

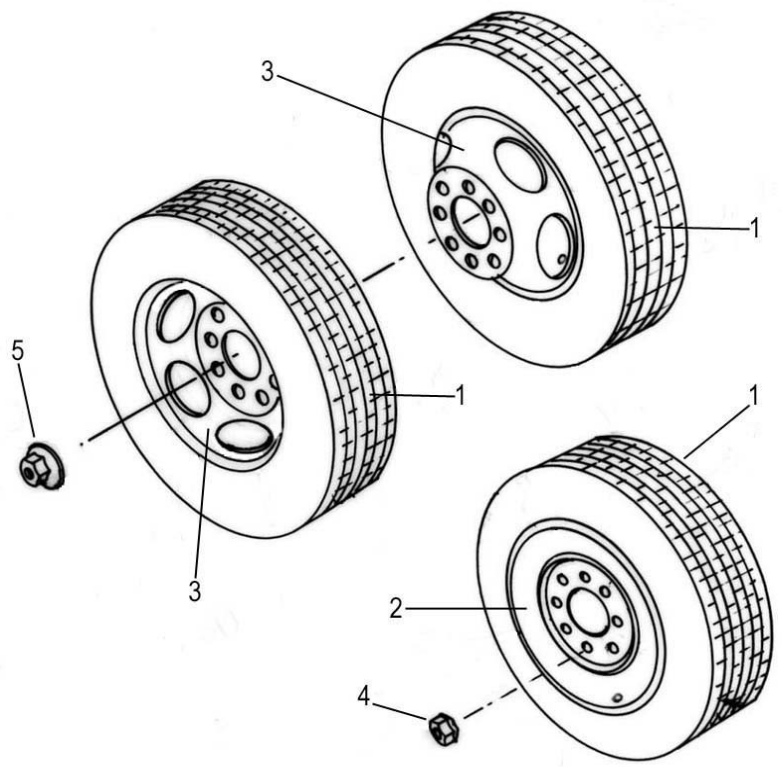


BODY ASSEMBLY –DETAIL

Item	Part Number	Qty	Description
1	B-TT10-00012-L	1	HOOD LEFT
2	C-TT4-0012-3	1	LOCKING T-HANDLE LATCH LEFT DOOR
3	B-TT10-00012-R	1	HOOD RIGHT
4	C-TT4-0012-2	1	T-HANDLE LATCH RIGHT DOOR
5	A-TT10-00048	1	BENCH SEAT
6	AE-OPT-0055-C	1	BENCH SEAT BACK CUSHION
7	AE-OPT-0055-B	1	BENCH SEAT BOTTOM CUSHION
8	AE-OPT-0183	1	BENCH SEAT WITH KILL SWITCH(OPTION)

WHEELS & TIRES

WHEEL & TIRE ASSEMBLY—DUAL REAR WHEEL MODELS



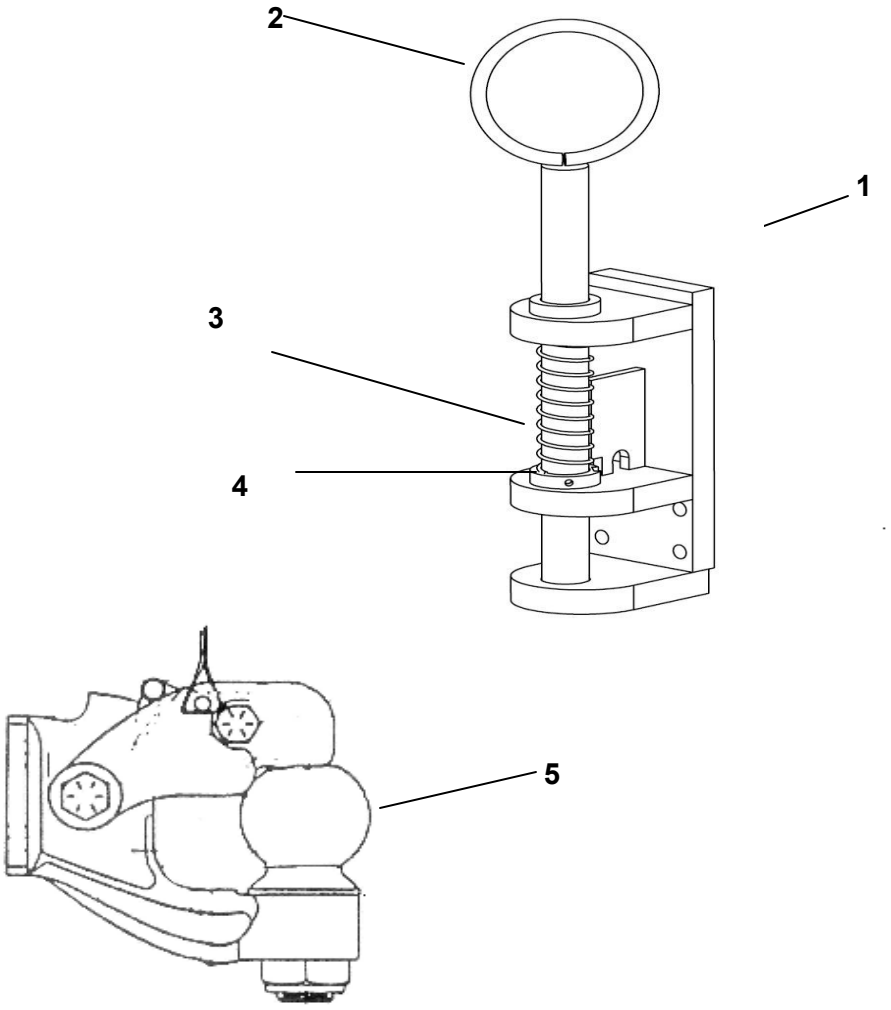
WHEEL & TIRE ASSEMBLY—DUAL REAR WHEEL MODELS—DETAIL

Item	Part Number	Qty	Description
1	A-TT10-00121	6	STANDARD 16.5 IN TIRE
2	A-TT10-00122	2	STANDARD 16.5 IN RIM-FRONT
3	A-TT10-00125	4	STANDARD 16.5 IN RIM-REAR
4	A-TT10-00123	16	WHEEL LUG NUT
5	A-TT10-00126	16	WHEEL LUG NUT
6	AE-OPT-0077-1		OPTIONAL ALL SEASON MUD & SNOW TIRE REQUIRES OPTIONAL 16 IN RIM
7	A-TT4-00122-1		OPTIONAL FRONT 16 IN RIM FOR AE-OPT-0077-1
8	A-TT10-00125-1		OPTIONAL REAR 16 IN RIM FOR AE-OPT-0077-1
9	AE-OPT-0181-1		OPTIONAL FRONT ALUMINUM 16 IN RIM
10	AE-OPT-0181-4		OPTIONAL REAR ALUMINUM 16 IN RIM
11	AE-OPT-0181-3		OPTIONAL TIRE FOR ALUMINUM RIM
12	AE-OPT-0058-1		OPTIONAL SNOW CABLES

* Tires listed above do not include foam fill option.

OPTIONS

HITCH OPTIONS



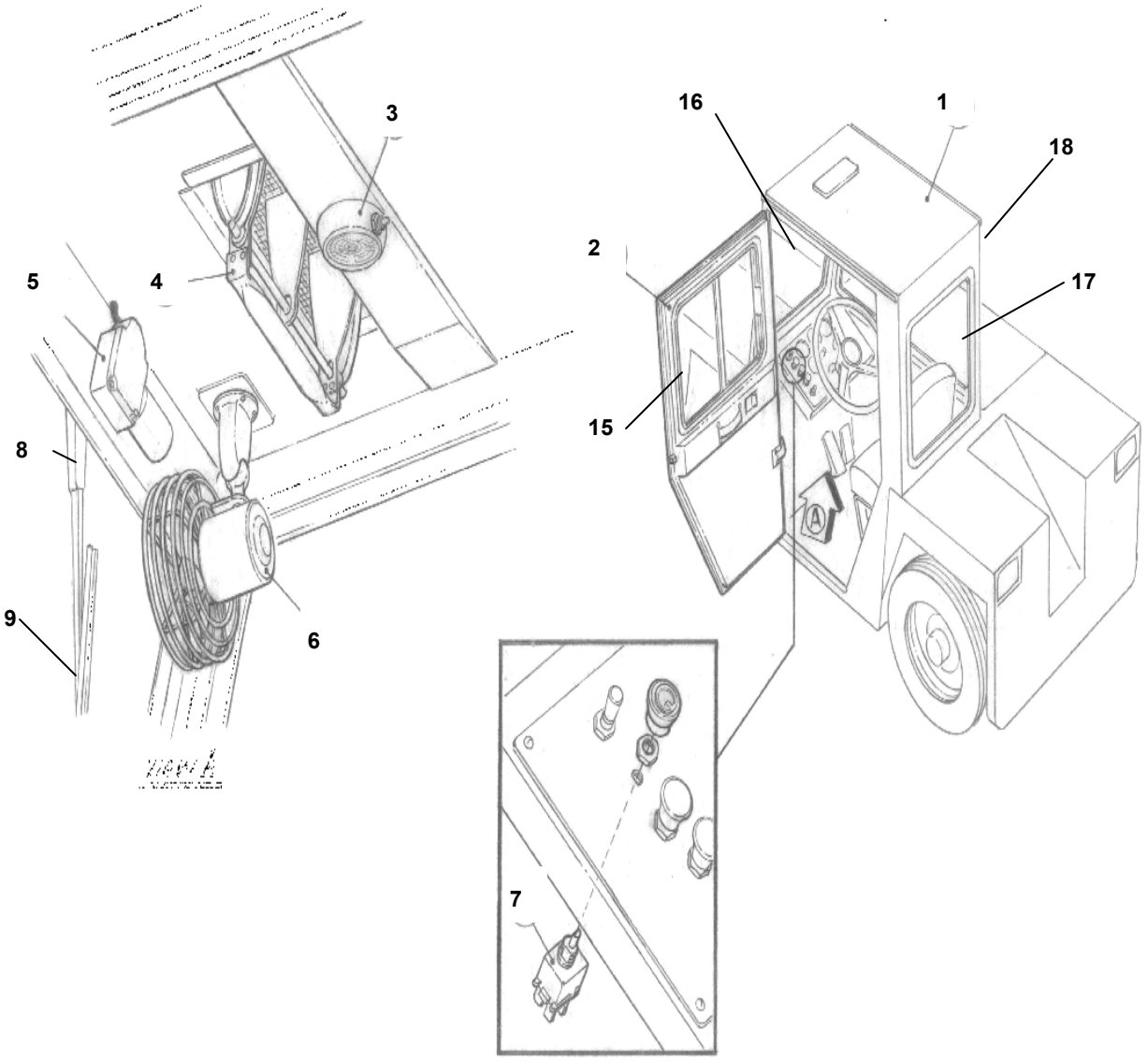
HITCH OPTION—DETAIL

Item	Part Number	Qty	Description
1	AE-OPT-0033	1	E-HITCH 1 1/2 " PIN-COMPLETE ASSEMBLY
2	B-TT3-0008 DET2	1	E-HITCH GUIDE 1 1/2" GUIDE PIN WITH RING
3	B-TT3-0008A	1	E-HITCH SPRING
4	B-TT3-0008 DET5	1	LOCKING COLLAR
5	AE-OPT-0028	1	PINTLE HOOK
6	AE-OPT-0026	1	AIRLINE HITCH 3" PIN WITH CABLE(NOT SHOWN)
7	AE-OPT-0093	1	AIRLINE HITCH 2 3/8" PIN (NOT SHOWN)

* The above are standard hitch options. Please call for special hitch options information

OPTIONS

CAB OPTION



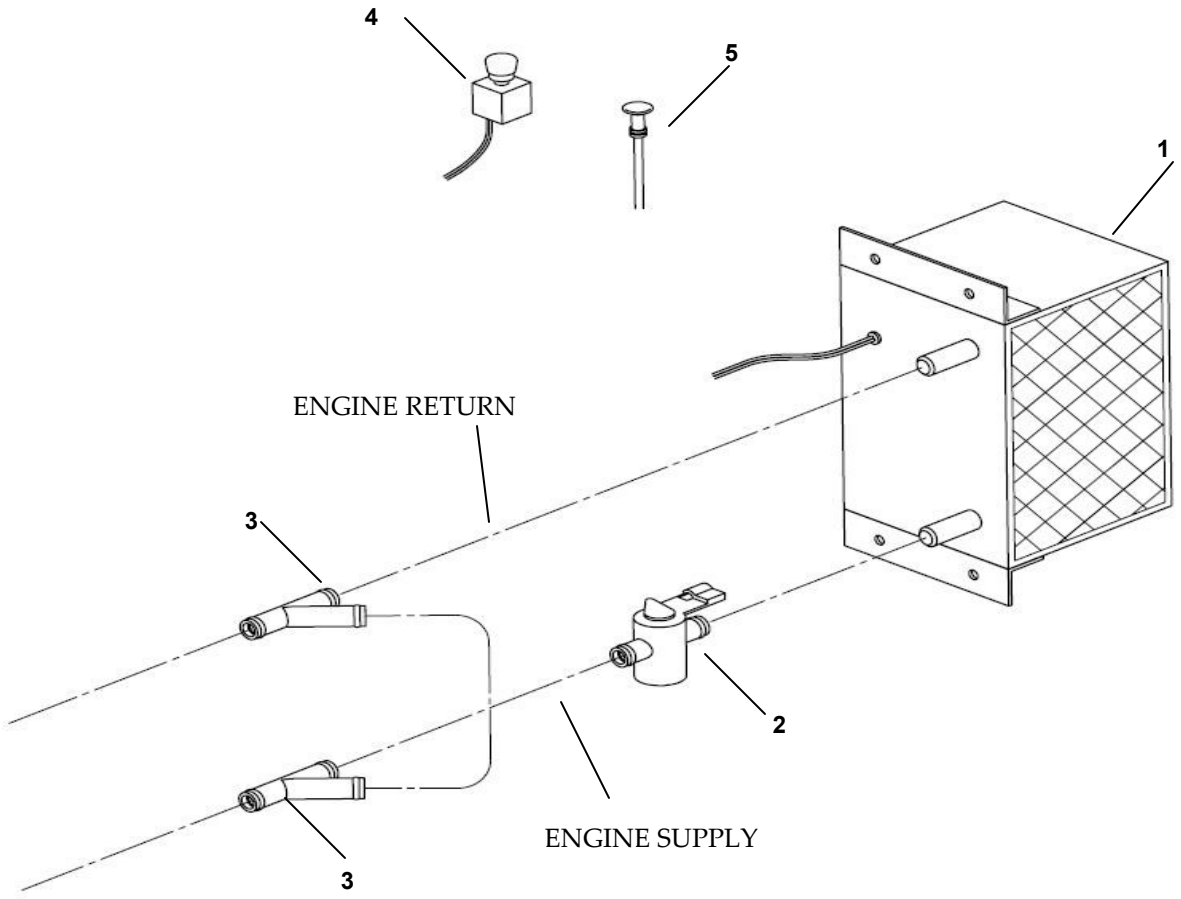
OPTIONS

CAB OPTION DETAIL

Item	Part Number	Qty	Description
1	AE-OPT-0083	1	CAB ASSEMBLY COMPLETE
2	414001	1	DOOR ASSEMBLY COMPLETE
3	A-TT4-00553	1	DOME LITE
4	A-TT4-00554	1	ROOF VENT
5	A-TT4-00555	1	WIPER MOTOR
6	A-TT4-00556	1	DEFROST FAN
7	A-TT4-00609	1	HEATER FAN SWITCH
8	991528	1	WIPER ARM
9	994890	1	WIPER BLADE
10	40516	3	DOOR HINGE
11	40515	1	STRIKER PLATE
12	48717	1	INSIDE DOOR HANDLE
13	990237	1	OUTSIDE DOOR HANDLE
14	49075	2	DOOR STRAP
15	994884	1	DOOR WINDOW
16	994883	1	WINDSHEILD
17	994882	1	REAR WINDOW
18	991809	1	SLIDING WINDOW
19	991815	1	FRONT QUARTER WINDOW

OPTIONS

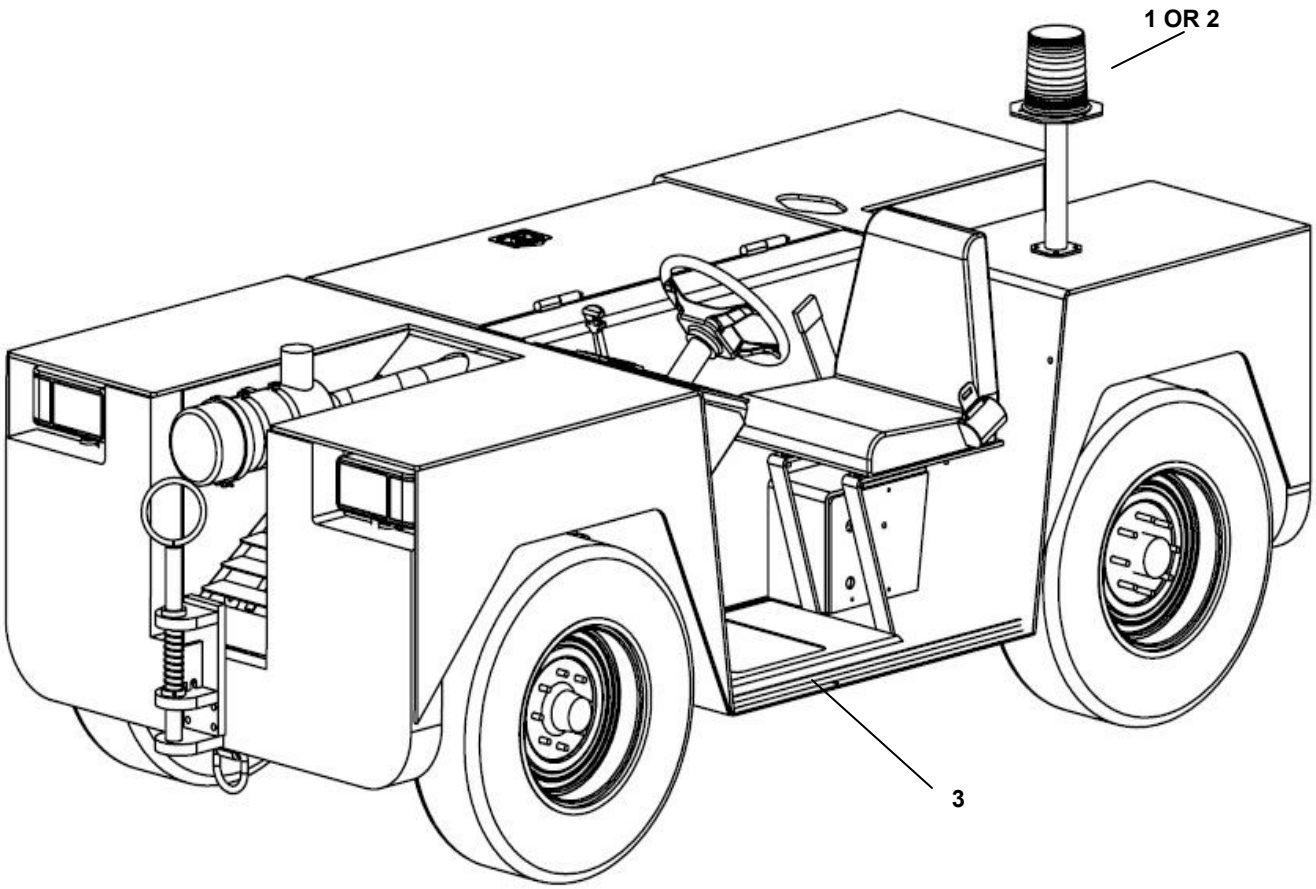
CAB HEATER DETAIL



Item	Part Number	Qty	Description
1	A-TT4-00601	1	HEATER ASSEMBLY
2	A-TT4-00607D	1	CONTROL VALVE
3	02220200A	2	Y CONNECTOR
4	A-TT4-00609	1	HEATER FAN SWITCH
5	A-TT4-00608	1	TEMPERATURE CONTROL CABLE
6	NPN		5/8 HEATER HOSE (NOT SHOWN)

OPTIONS

STROBE, BEACON & FLOOR MAT OPTIONS



Item	Part Number	Qty	Description
1	AE-OPT-0002	1	AMBER ROTATING BEACON
1A	R5024BH	1	REPLACEMENT BULB 24VDC
1B	R5012BH	1	REPLACEMENT BULB 12VDC
2	AE-OPT-0007	1	STROBE
2A	129	1	REPLACEMENT BULB FOR STROBE
2B	AE-OPT-0009	1	1/2 COVER FOR STROBE
3	A-TT10-00450	1	BASIC FLOOR MAT(NO SENSOR)
3A	A-TT10-00450-1	1	OPERATOR SWITCH MAT (WITH SENSOR)
3B	A-TT10-00451	1	SWITCHMAT DELAY TIMER

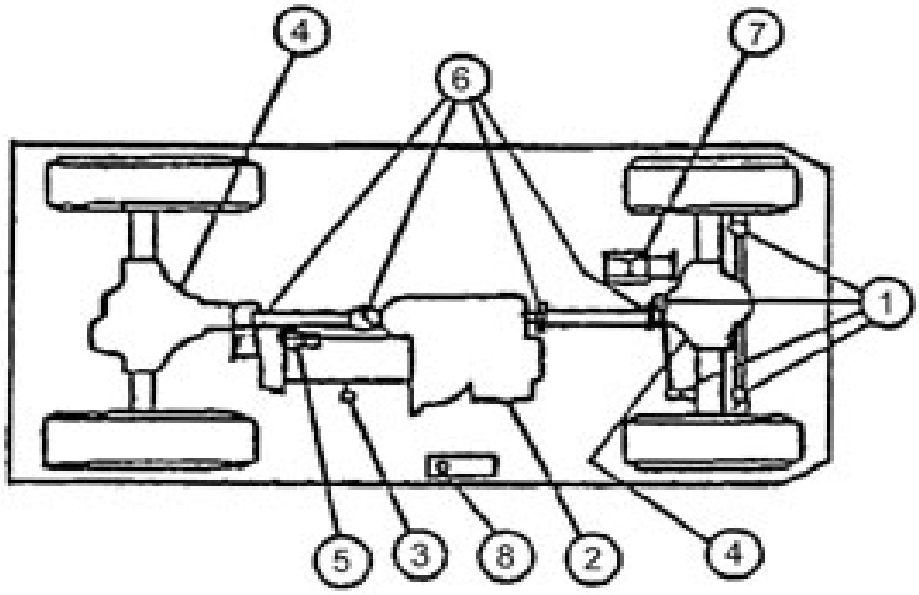
OPTIONS

OTHER OPTIONS LISTED NOT SHOWN

Item	Part Number	Qty	Description
1	AE-OPT-0091	1	LUBRICITY FILTER SYSTEM
2	FS20000	1	LUBRICITY REPLACEMENT ELEMENT
3	AE-OPT-0001	1	BACK UP ALARM
4	AE-OPT-0099	1	MASTER BATTERY DISCONNECT SWITCH
5	AE-OPT-0099A	1	MASTER BATTERY DISCONNECT SWITCH-LOCKOUT LEVER KIT
6	AE-OPT-0086	1	INTECOM JACK
7	AE-OPT-0094	1	12V ACCESSORY OUTLET

TT 10-12 DIESEL MAINTENANCE

LUBRICATION DIAGRAM—TT SERIES-ALL WHEEL DRIVE



Item	Identification	Type Service	Lubricant
1	STEERING LINKAGE	LUBE	EP MULTIPURPOSE GREASE
2	TRANSMISSION OIL	CHECK	DEXTRON III TYPE TRANSMISSION FLUID
3	ENGINE OIL	CHANGE	15W40 CD OE/HDO (MIL-L-2104)
4	DRIVE AXLES	CHECK	80-90 GEAR OIL (MIL-L-2105)
	AXLE SHAFT U-JOINT	CHECK	EP MULTIPURPOSE GREASE
5	POWER STEERING PUMP	CHECK	AUTOMOTIVE POWER STEERING FLUID
6	DRIVE SHAFT	LUBE	EP MULTIPURPOSE GREASE
7	BRAKE MASTER CYLINDER	CHECK	DOT 3 BRAKE FLUID
8	ENGINE COOLANT	CHECK	ETHYLENE GLYCOL/ WATER (50/50 MIX) MIL-A-46153
9	ACCELERATOR CABLE	LUBE	**SUMMER MONTHS WD40 PENETRATING OIL WINTER MONTHS ANTI FREEZE

*CHECK WHEN ENGINE IS AT OPERATING TEMPERATURE
**IT IS RECOMMENDED BY MANUFACTURER TO PROLONG THE LIFE OF YOUR ACCELERATOR CABLE THAT THE ABOVE LUBRICATION BE FOLLOWED

SEE PREVENTATIVE MAINTENANCE SCHEDULE NEXT PAGE

PREVENTATIVE MAINTENANCE SCHEDULE

No.	Description of Check/Service	Operational Hours								Completed
	X-Check * - Requires Service	Daily	50	100	250	500	750	1000	1500	
1	Engine Oil and filter ***first 50 hours and every 100 hours thereafter**	x	*	*						
2	Transmission Fluid ***every 500 hours**	x				*		*	*	
3	Power Steering Fluid	x								
4	Brake Fluid	x								
5	Coolant Level	x								
6	Fuel Filter ***every 500 hours**					*		*	*	
7	Drain Water/Fuel Filter ***every 250 hours**				*	*	*	*	*	
8	Lubricity Filter ***every 250 hours**				*	*	*	*	*	
9	Oil Leak Check	x								
10	Engine Rubber Mounts		x	x	x	x	x	x		
11	Inlet & Exhaust Pipes to Manifold		x	x	x	x	x	x		
12	Throttle Controls		x	x	x	x	x	x		
13	Coolant Hoses		x	x	x	x	x	x		
14	Belt Drives		x	x	x	x	x	x		
15	Fuel System Leak Check		x	x	x	x	x	x		
16	Electrical Wires and Connections		x	x	x	x	x	x		
17	Suspension U-Bolts		*							
18	Battery Cables			x						
19	Air Cleaner Element ***every 250 hours**				*	*	*	*	*	
20	Brake Pads (Front)					x		x		
21	Drum Brake Lining (Rear)					x		x		
22	Brake Lines and Hoses					x		x		
23	Flush Cooling System					*				
24	Clean Feed Pump Strainer								*	
25	Check Injection Nozzles					x		x	x	
26	Cylinder Compression Pressure							x		
27	Valve Clearance Check							x		
28	Position Crankcase Ventilation Valve Cleaning								x	
29	Rotate Tires ***every 500 hours**					*		*		
30	Accelerator Cable		*							
31	Axle Shaft U-Joint		*							

This section below has been added to for your record keeping convenience

Date Service Performed	
Tug Serial Number	
Tug Hours	
Technician	

DAILY OPERATOR RESPONSIBILITES

Proper Fluid Checks

Engine Oil

Check engine oil with the unit on a level surface, the key in the "OFF" position, the shifter position in "PARK" and parking brake applied. Open side access door. Remove dipstick from crankcase, wipe it with a cloth. Insert it fully and take out it gently again. Check the oil level by the marks on the dipstick. The oil level must be between the "Max" level and the "Min" level. DO NOT OVERFILL! SEE PAGES 12 & 13 FOR SAFETY BULLETIN!

Coolant

DO NOT remove recovery tank cap or check coolant level while engine is hot! With engine cool, the key in the "OFF" position, the shifter position in "PARK" and the parking brake applied, open hood, set hood prop and look at left side of recovery tank. The reservoir tank is translucent, so the fluid is readily visible without removing the cap. Fluid level should be at the "Cold fill level".

Transmission Fluid

With unit in park and parking brake set in the "ON" position, start engine. Open side access door. Remove dipstick from transmission case, wipe it with a cloth. Insert it fully and take it out gently again. Check the fluid level by the marks on the dipstick. The transmission fluid level must be between the "Max" level and the "Min" level on the dipstick. DO NOT OVERFILL.

Brake Fluid

Check brake fluid with the unit on a level surface, the key in the "OFF" position, the shifter position in "PARK" and parking brake applied. Open hood, set hood prop and locate master cylinder reservoir. Remove spring clips and take off lid. Brake fluid level should be at the top of reservoir.

Power Steering Fluid

Check power steering fluid with key in "OFF" position, the shifter position in "PARK" and the parking brake applied. Open hood, set hood prop remove cap from power steering reservoir. Fluid level should be between the arrows on the indicator stick. DO NOT OVERFILL.

Recommended Filters:

Engine oil	Isuzu 8-94430-983-1	Fuel Filter	Isuzu 8-94414-796-3
	Carquest 85390		Fleetgard FF5114
	Fleetgard LF3528		
Air Cleaner	Donaldson P549271 Or P14-8966	Transmission	Wix 58705
Lubricity Filter	Fleetgard FS20000		

SPECIFICATIONS & CAPACITIES

MODEL #	ISUZU 4JG1T
DESCRIPTION:	3.1 Liter, Isuzu four cylinder, equipped with turbo charger

# OF CYLINDERS	4 IN-LINE, 4 CYCLE
BORE & STROKE INCHES (mm)	3.74 X 4.21 (95.0 X 107.0)
DISPLACEMENT, CUBIC INCHES (L)	189 (3.1)
COMPRESSION RATIO	18.60
FUEL	No 1 or No 2 DIESEL
ALTERNATOR	50 AMP, 12 VOLT, NEG GROUND
ENGINE WEIGHT FULLY DRESSED LB (KG) (PROX)	610 (277)

ENGINE CRANKCASE CAPACITIES

ENGINE	U.S. QUARTS	IMPERIAL QUARTS	LITRES
3.1 L (189 CID) DIESEL***	10.00	8.33	9.46
***15W40CD IN CONTINENTAL U.S.			

FUEL TANK REFILL CAPACITIES

U.S. GALLONS	IMPERIAL GALLONS	LITERS
18.0	15.0	68.0

SAE (SOCIETY OF AUTOMOTIVE ENGINEERS) NO. 2-D

JIS (JAPANESE INDUSTRIAL STANDARD) NO 2

DIN (DEUTSCHE INDUSTRIE NORMEN) 51601

BS (BRITISH STANDARD) CLASS A-1

*Please refer to Isuzu Engine Instruction Manual IDE– 6053 for further information

SPECIFICATIONS & CAPACITIES

TRANSMISSION REFILL CAPACITIES

ENGINE	U.S. PINTS	IMPERIAL PINTS	LITRES
3.1 L (189 CID) DIESEL	8.00	6.60	3.80
* USE DEXTRON III TYPE TRANSMISSION FLUID OR EQUIVALENT			
**ADD 9 PINTS, 7.5 IMPERIAL PINTS OR 4.25 LITERS IF TORQUE CONVERTOR HAS BEEN DRAINED			

ENGINE COOLING SYSTEM REFILL CAPACITIES

ENGINE	U.S. QUARTS	IMPERIAL QUARTS	LITRES
3.1L (189 CID) DIESEL	16.00	13.30	15.10
* A 50/50 MIXTURE OF GLYCOL AND CLEAN WATER			

BRAKE SYSTEM

The brake system is power assisted hydraulic, front disc type and rear drum type. USE DOT 3 BRAKE FLUID.

STEERING SYSTEM

The steering system is power assisted hydrostatic type. Use TEXACO FLUID PART NO. 11872 OR EQUIVALENT SPEC FOR GM, CHRYSLER AND FORD AUTO APPLICATIONS

AXLE REFILL CAPACITIES

AXLE	U.S. PINTS	IMPERIAL PINTS	LITRES
FRONT STEER – NON DRIVE	N/A	N/A	N/A
FRONT DRIVE AXLE	5.20	4.37	2.48
REAR DRIVE AXLE	8.50	7.00	3.75
* SERVICE REFILL CAPACITIES ARE DETERMINED BY FILLING TO THE BOTTOM OF THE FILLER HOLE			
**USE 80W90 HYPOID GEAR LUBRICANT			

TIPS FOR INCREASED ALL WEATHER TRACTION DURING AIRCRAFT PUSHBACK

1. Reduce air pressure in pneumatic tires from 60 PSI to as low as 25 PSI. (**restore air pressure to 60 psi as soon as weather emergency ends).
2. When pushing with All Wheel Drive tractors, make sure the towbar is level or slightly downhill toward tractor.
3. When towing with Rear Wheel Drive-raise hitch height.
4. When pushing with Rear Wheel Drive-lower hitch height.

Note: These strategies(2, 3 and 4) maximize all weather traction.

5. When pushing aircraft on ice or icy snow with All Wheel Drive, a wheel may loose traction (wheel spin). To stop front wheel spin, apply some service brake gradually with left foot until wheel spin stops and hold, while continuing the pushback. Coordinate the left foot service brake pressure and the right foot accelerator, to maintain a smooth pushback. To stop rear wheel spin, apply parking brake with lever until it stops while continuing the pushback.
6. On ice or snow use chains or cables. If the use of chains is prohibited, there are traction cables that serve the same function as chains but are much easier to mount and are very kind in terms of abrasion to all surfaces.
7. Keep fuel tank full, as much as possible.
8. Consult with Eagle Tugs factory for additional assistance.

FRONT END ALIGNMENT PROCEDURE

Find center line of tire front and back

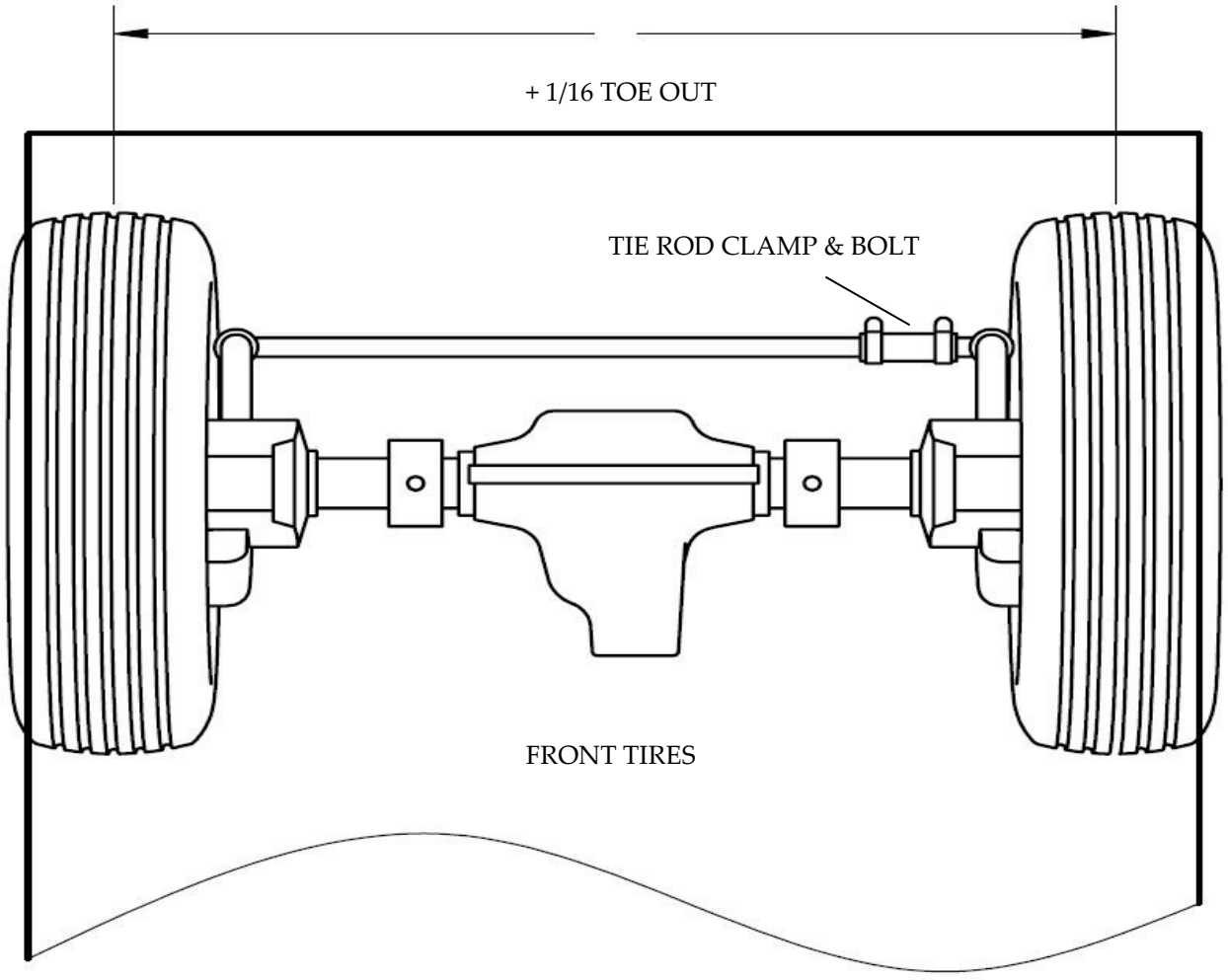
Check with tape measure to see difference

The front should be 1/16 inch more that the rear

1/16 inch toe out, if less or greater loosen the two bolts on the tie rod clamp

Turn clamp in or out to achieve desired setting—1/16 in toe out

Retighten two bolts on the tie rod clamp



REVISION LOG

Rev	Date	Description	Appr.
4	19-Nov-2013	Removed warranty statement	SEB
5	26-Aug-2014	Corrected engine dress part numbers.	SEB